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PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*On the Rise of the Dublin School of Midwifery; with Memoirs of Sir Fielding Ould, and Dr. J. C. Fleury*[a]. By ALFRED H. M'CLINTOCK, M.D., F.R.C.S., M.R.I.A., Master of the Lying-in-Hospital, and President of the Dublin Obstetrical Society.

GENTLEMEN OF THE OBSTETRICAL SOCIETY,—It is not, I assure you, without great diffidence that I occupy this place to-night. Under any circumstances I would feel the position a most trying one; but on the present occasion it is peculiarly so, as the time seems so short since I had the privilege of addressing you before from this Chair. I am, however, sensibly alive to the honour your Council have done me in requesting that I would open this Session of the Society with an introductory address.

This request I should, without hesitation, have declined, did it not so happen that I had by me some materials towards the history of three men whose names are intimately—I might say indissolubly—connected with the establishment and the

[a] The Introductory Address to the Dublin Obstetrical Society, at the Opening of its Twentieth Session.

fame of our National School of Midwifery. Such a topic I knew could not fail to meet with a favourable reception from the members of the Obstetric Society: nay more, I feel it would be considered by you as a fit and worthy subject to be incorporated into an inaugural discourse.

Under this conviction I accepted the invitation. I was anxious that due respect should be shown to the memories of those eminent individuals; at the same time, I was well aware that the amplest indulgence would have to be conceded towards the *manner* in which the subject would be brought before you. But, Gentlemen, having so often experienced the indulgence of this Society, I could not doubt of its liberal extension on an occasion like the present.

We meet this evening under circumstances of peculiar interest. Our Society has commenced its twentieth session; and proud I am to see around me on this occasion so many of its tried friends and able supporters. It is true, indeed, that few of those who assisted at its inauguration in the year 1838 are now amongst us. That "few" includes some who were then just entering as candidates in the eager race for public confidence and professional distinction, but who now occupy the enviable and honored position of the heads of our department. Others, who at that period were active labourers in the obstetric field, have since retired from it, matured in reputation, and having reaped the golden harvest of their industry and their talent. In this favoured class, who have thus attained to that *summum bonum* which constitutes the culminating point of our worldly expectations and ambition, I am happy to find the name of Dr. Evory Kennedy, the founder of this Society.

Lastly, others there were whose names and whose works alone remain to us; they themselves have passed "beyond that bourne whence no traveller returns." I rejoice, however, to think that their places are occupied by cultivators of obstetric science not less ardent than they were, and who possess the additional advantage of their example to stimulate and encourage them.

But, Gentlemen, we commemorate another and far more important event on the present occasion. This great Hospital, within whose precincts we are assembled, and of which our Society is but the later offspring, will shortly enter upon the *second* century of its existence. The benefits which have resulted from its establishment may be said, without hyperbole or exaggeration, to be incalculable.

As it was the first, so we find it has been the model of every institution of the kind in the wide extent of the British Em-

pire. It has gained for this city pre-eminent celebrity as an obstetric school; and it has thereby contributed its full share towards sustaining the character of the Irish School of Medicine generally.

Although it is strictly true that this Hospital was opened for patients on the 8th of December, 1757, still it is deserving of remembrance that its founder, Bartholomew Mosse, had, twelve years previously, established, at his own expense, in South George's-street, a lying-in hospital, which he maintained in active operation until the present building was fit for the reception of patients.

As a *charity* for the relief of human suffering in its most trying form, as a *seminary* for practical instruction in midwifery, and as a *source of obstetric data*, this Hospital has more than realized the most sanguine expectations of its founder. In support of these assertions, I may mention, first, that over 183,000 women have been admitted into the Hospital during the century just closing; secondly, that since the year 1786, upwards of 5000 pupils, from every part of the civilized world, have received their obstetric education within its walls[a]; and lastly, that it has given to the world the well-digested statistical results of above 47,000 cases of labour[b]. Such a collection of minute obstetric data, relating to every variety and complication and phase of parturition and its consequences, has not been published by any other hospital.

To dilate upon this subject would be a gratifying, but superfluous task.

Of those whom I now have the honour to address, few, if any, are not the alumni of this Hospital. Of its value they have had personal experience; and in its history, intimately associated as it is with that of the Obstetric School of this city, they must feel more than a passing interest.

I have, therefore, thought that it would not be inappropriate to the present time and occasion to lay before you, Gentlemen, some notices of persons and incidents connected with this Hospital in the earlier part of its existence.

[a] For the first thirty years no official registry was kept of the pupils attending the Hospital.

[b] Viz.:—

Dr. Joseph Clarke's Report, ...	10387 cases.
Dr. Collins' Report, ...	16414 ,,
Drs. Hardy and M'Clintock's Report,	6634 ,,
Drs. Johnston and Sinclair's Report,	13768 ,,
Total, ...	47203

Drs. Johnston and Sinclair's Report will very shortly be published, as it is now nearly out of the printer's hands.

The history of its founder, Bartholomew Mosse,—his exertions, his devotion, and his extraordinary perseverance,—has been ably sketched by Mr. Wilde in the second volume of the Dublin Quarterly Journal of Medical Science. Ample justice is there done to the exalted character and far-seeing wisdom of this great philanthropist. One circumstance relative to Mosse's early medical history I may be permitted to mention, as it has escaped notice in the paper just alluded to. He is occasionally styled Surgeon and Man-midwife, or Surgeon and Licentiate in Midwifery. His surgical diploma, Mr. Wilde tells us, was granted (as was customary then) by the Surgeon-General; but the other (license in midwifery) was a degree conferred by the King and Queen's College of Physicians, and qualified or licensed the holder to practise midwifery. On searching the Minutes of the College, I find under the date of May 3, 1742, the following record:—"Agreed that Mr. Mosse and Mr. Carter have a license granted them for practising midwifery, having been examined and approved." The Mr. Carter here named is, I presume, the same individual who, in conjunction with Fielding Ould, fulfilled the medical duties of the Hospital during the nine months' interval between the death of Mosse and the appointment of his successor in the office of Master.

It is here worthy of mention, that at a very early period the importance of midwifery was fully recognised in this city. Before the year 1715 (how long I cannot exactly say), the King and Queen's College of Physicians had instituted a special examination in obstetrics, and to those gentlemen whose answering was approved of, a license was granted. In 1743 a Professorship of Surgery and Midwifery was founded. The Royal College of Surgeons, within the first year of its incorporation (1784), established a Professorship of Midwifery, and also a distinct examination in the same, and the successful candidates received a diploma authorizing them to practise this branch of the healing art.

The ceremony observed on the opening of the Hospital is thus quaintly described by a contemporary historian. The Duke of Bedford, then Lord Lieutenant, her Grace the Duchess, and a great number of the nobility and gentry, were entertained at breakfast at the Hospital, after which "fifty-two poor women, great with child, who attended in the hall with proper certificates for admission, and were all decently clothed in uniform at the expense of the Hospital, each in a blue calimanco gown and petticoat, shift, handkerchief, cap, and apron; and thus they appeared before his Grace as President of the Hospital, the Duchess, and the rest of the Governors and Guardians, with

many of the nobility and gentry, who all expressed the highest satisfaction. During the whole time of breakfast, and the ceremony of opening the Hospital, their Graces and the company were entertained with a concert of vocal and instrumental music, and everything was conducted in the most regular, easy, and genteel manner."

Mosse did not long survive the achievement of what had been the great object of his life. He had, indeed, the supreme gratification of seeing the Hospital finished, and patients regularly received into its wards; and in contemplation of the asylum which his genius and perseverance had provided, he might with all truth have exclaimed—

"Exegi monumentum ære perennius."

The intense and constant strain upon his mental energies, together with severe bodily fatigue, had by this time greatly impaired his bodily health. In the beginning of the winter of 1758 (within twelve months from the opening of the Hospital), he was confined to his chamber; later in the year he was removed for change of air to Cullenswood; and on the 16th February, 1759, in the forty-seventh year of his age, he breathed his last.

"Thus," to quote the words of his biographer, Mr. Wilde, "died this great and good man, in the prime of life and usefulness, possessing great energy and high benevolence of character, which he so employed as to have conferred immeasurable benefit upon his own and subsequent generations. His eulogy is to be found in his acts. Without fortune, without influence, without patronage, without precedent, he conceived the project of affording relief to a certain class of the community; and with extraordinary energy, prudence, and perseverance, never relaxing, never despairing, he carried it into execution at an expense of character, station, and pecuniary independence."

May we not truly apply to him the beautiful language of Grattan, and say, "that in feeding the lamp of charity, he had exhausted the lamp of life"?

Immediately after his death Mr. (afterwards Sir Fielding) Ould, and Dr. Carter, volunteered to superintend the management of the Hospital until a Master was elected. Both these gentlemen were appointed by the Board to take charge of the patients month about. At the Charter Board, in the following November (1759), Mr. Ould was elected Master of the Hospital in the room of Mosse, and he proved himself in every way a worthy successor of this great man. His earnest zeal in

the welfare of the institution is amply attested by the fact, that for twenty-eight years he took an active and leading part in the management of its affairs, and was a constant attendant at the boards and committees. His name is familiar to us all, and is held in just respect amongst us, even by the many who know but little of his writings, and nothing of his life or character.

The literary reputation of the Dublin School of Midwifery commenced with Fielding Ould, and his treatise, original and excellent in itself, was but the earnest and forerunner of a numerous succession of works on the same and kindred subjects that in after years emanated from this city[a].

Sir Fielding Ould was descended from an ancient English family. His grandfather, Colonel Ould, came to this country in the army of King William III., and commanded the Royal Regiment of Welsh Fusileers (subsequently the 23rd Regiment Royal Welch Fusileers) at the Battle of the Boyne.

After the surrender of Dublin, the superior officers of the conquering army were admitted freemen of the city, and the names of Colonel Ould, and of his son, Captain Ould, are to be found on the Freemen's roll.

The colonel and his son were present at the battle of Aughrim, after which engagement the Welsh Fusileers were quartered in Galway. Captain Ould there married a Miss Shawe, the daughter of a gentleman of that county, and had by her two sons,—Fielding, the subject of the present sketch, born about 1710,—and another named Abraham. Captain Ould was a few years afterwards assassinated at night in the streets of London, whereupon his widow returned to her father in Galway, who, being a gentleman of ample fortune, brought up his grandsons at his own expense. Fielding became a surgeon and accoucheur, and Abraham a barrister[b].

It is more than probable that Fielding Ould received his medical education in some of the continental schools; and, indeed, we learn from the preface to his book, that at all events

[a] The principal of these separate and independent works are—Jebb on the Process of Labour; Dease's Observations in Midwifery; Foster's Lectures upon Midwifery; Brenan on the Use of Turpentine in Puerperal Fever; Douglas on Spontaneous Evolution; M'Keever on Rupture of the Uterus; Maunsel's Dublin Practice of Midwifery; Travers Burke's Accoucheur's Vade Mecum; Kennedy on Obstetric Auscultation; Montgomery's Exposition of the Signs and Symptoms of Pregnancy; Maunsel and Evanson on the Diseases of Children; Collins' Midwifery; Churchill's Theory and Practice of Midwifery; Churchill's Operative Midwifery; Churchill on Diseases of Women; Churchill on the Diseases of Children; Hardy and M'Clintock's Practical Midwifery; Sinclair and Johnston's Practical Midwifery.

[b] For this history of the Ould family I am indebted to John Morrison, Esq., M. D., whose mother was a grandchild of Sir Fielding.

he studied midwifery in Paris, and very possibly under the celebrated Gregoire, who about that period enjoyed great reputation as an obstetric teacher.

It was during this sojourn in Paris, whilst yet a young and comparatively inexperienced accoucheur, that he made the observation of the lateral position of the head—a discovery of great practical importance, and perfectly original with him. This shows that he was a man who observed and reasoned for himself, and possessed in a high degree accuracy of observation and independence of mind.

He settled down to practise here somewhere about 1736 or 1737, and seems from the first to have devoted himself principally, if not exclusively, to midwifery. He obtained the license in midwifery of the King and Queen's College of Physicians, August 16, 1738. An entry to this effect appears on the Minutes of the College for that day, and is as follows:—"Memorandum, that Mr. Fielding Ould was examined for a license to practice midwifery, and, being found singularly well qualified, was licensed accordingly." It may be remarked here that the date of his obtaining the obstetric license of the College of Physicians is nearly four years prior to the time of Mosse's getting the same: from which, and other circumstances, I am led to infer that Ould was in point of age the senior of the two by about a couple of years.

His "Treatise of Midwifery" was published in 1742, though written, and perhaps printed, the year before. It is dedicated to the President, Censors, and Fellows of the College of Physicians in Dublin, and has facing the title-page a testimonial of approval, signed by Francis Le Hunt, Brian Robinson, Henry Cope, Robert Robinson, and Edward Barry, in their official capacities: the first as President, and the rest Censors, of the College;—the work having been referred to them (November 2, 1741) for an opinion of its merits, by the College at large, to whom Ould had submitted it for approval.

This Treatise was, I believe, the first work upon midwifery published in this country: nay more, if we except the writings of Chapman and Sir Richard Manningham, it was in fact the first obstetric treatise having any pretensions to merit and originality which appeared in the English language. But, independently of this, the work possessed intrinsic merits of a superior kind, and contained many new observations of great importance; so much so that we would leave it to any impartial and competent reader to say whether it is not superior to any English obstetric treatise published before that of Smellie in 1752.

Although at the risk of appearing tedious to some present who are familiar with Ould's writings, I still cannot forbear noticing a few of the points, his observations upon which show the superiority and the accuracy of his obstetric knowledge: evidencing, at the same time, how much he was in advance of his contemporaries in these and other matters relating to midwifery.

1. In contradiction to Mauriceau and numberless other writers upon the gravid uterus, Ould maintained that the thickness of its parietes did not diminish, but rather increased, as pregnancy advanced—a fact which is now clearly established, and known to every tyro.

2. Our author successfully combats the views of Deventer, who laboured to prove that the greatest difficulties in delivery proceed from obliquity of the uterus; whereby, as Ould quaintly remarks, "he has made an otherwise small treatise upon midwifery swell into a large volume." Deventer's work appeared in the eighteenth century. It was written in the Latin language, but was subsequently translated into French. The doctrine which it promulgated had been received with great applause by many persons of note in the profession. But Ould was not a man to be blindly led by authorities. His discernment and observation showed him the absurdity of this theory. In a few short sentences he destroys the entire foundation of Deventer's doctrine, and demolishes the imposing superstructure raised upon it.

3. The instrument invented by Ould for lessening the head—viz., the *terebra occulta*, though completely and justly superseded by the perforator, was still, I think, a better and much safer instrument than any of those in use when he began to practise. The principal objection to the terebra occulta is, that with it we cannot enlarge the opening into the cranium: an objection which does not apply to the scissors of Smellie, or to the perforator of later years.

4. In referring to the use of the forceps, he lays it down as a fundamental axiom that it should not be used in the delivery of dead children. This precept may not altogether accord with the teaching of some modern obstetric authorities, or with the alleged results of statistical computation; nevertheless, I am very sure it has the full, entire sanction of every unprejudiced and experienced practitioner.

5. Within the last few years we have heard a good deal about turning the fœtus in cases of slight deformity of the pelvis; and rival claims were advanced for the merit of originating this proposal. In point of fact, however, the merit—be it

great or small—of originality in this matter, fairly belongs to Ould. I shall quote his own words respecting the practice in question:—

"Suppose a woman in labour, who, by the experience of a former delivery, was found by the operator to have the passage through the bones of the pelvis so narrow as to refuse an exit to the child (though not of an extraordinary size) by means of the common efforts of nature, and that on this account it died, or was destroyed by instruments for the preservation of the mother's life. In this case there is a strong probability of saving the child by introducing the hand when the membranes break, and bringing it forth by the feet. . . . . It may be objected that the same narrowness of the passage through the pelvis, which hindered the natural expulsion with the head foremost, may hinder its extraction when brought forth by the feet; this is also allowed; but yet, if we consider the matter properly, it will appear that by drawing from a small end, which is the feet, in order to bring forth the larger, with the additional assistance of holding the legs in one hand, and having the finger of the other in the child's mouth, there is a far greater probability of bringing it forth than when the large end comes first."

6. The most original observation in this Treatise of Ould's, and that upon which his title to fame most securely rests, is the statement respecting the position of the head during its transit through the pelvis—namely, that the face is directed to one side or other of the pelvis, and not towards the sacrum, as was the universally received doctrine. Dr. Rigby, in his translation of Naegèlé, pronounces this observation to be the "punctum saliens" of all our knowledge respecting the mechanism of parturition. In the present assembly, the importance of a right understanding of this mechanical process need not be enlarged upon. It lies at the foundation of all our obstetric practice, and gives midwifery more pretensions to being a science than is possessed by physic or surgery. It is true the full exposition of this subject was reserved for other observers—namely, Solayres de Renhac, Baudelocque, and Naegèlé; but we must never forget that the first step in this demonstration was made by Fielding Ould.

7. In this brief enumeration of the prominent merits of Ould's Treatise, it would be unjust not to mention his strongly expressed opinion of the necessity for a consultation in all cases of difficulty, and especially where a resort to craniotomy seems imperative. At the present day the importance of this duty is fully recognised, but it was very different a hundred

years ago. The accoucheur could then scarcely ask for a consultation without exposing himself to the imputation of ignorance. It showed, therefore, in Ould no small degree of sound judgment and moral courage, thus to oppose the general sentiment. He advocates this line of conduct on the same grounds, and for the same reasons, as are now admitted without hesitation by all practitioners, as well as by the public.

It could scarcely be expected that a work which contained so much that was new, and which unsparingly assailed many established obstetric doctrines, would fail to provoke censure and controversy. What the critics of the day said of it I am unable to discover; but we can well suppose that Ould's book created no small sensation, when a work of nearly equal size was written and published for the express purpose of "showing his Errors in Anatomy, the Danger and Bad Consequences attending his Practice and Manner of Delivery." The author of this critical treatise was a Dr. Thomas Southwell, who dates the preface "from his house in Kildare," and styles himself "M.D. & Man-midwife"[a]. Although this author displays considerable critical acumen, and literary acquaintance with his subject, still it is easy to see that he was destitute of candour or originality. Every new observation put forward by Ould he rejects as unfounded; nor will he even admit that there is the least merit in any part of his Treatise.

Thus the position that Dr. Southwell took in relation to Ould was precisely similar to that of Dr. Burton, in later years, to Smellie. The only difference between those annotators is, that Burton as an author is only known from the fact of his having written against Smellie (for he is also known to the readers of Tristram Shandy, under the name of Dr. Slop), whilst Southwell and his Treatise are both alike forgotten.

It is not a little curious that Burton, in his "Letter to Smellie," cites Ould as an authority upon one of the points at issue between them.

Dr. Southwell, in a rather scornful way, describes Ould as being "the youngest surgeon practising in midwifery in the city," which seems probable enough.

I have mentioned that Ould became Master of the Hospital in November, 1759. At that time this officer was not a Governor *de virtute officii;* but Ould was elected a Governor the May following (1760), and the same month the honour of knighthood was conferred upon him by John Russell, fourth Duke of Bed-

[a] This work consists of two parts, the first of which appeared in 1742, and the second in 1744. Both are to be found in the Library of the College of Surgeons, among the "Medical Tracts," vols. xcii. and xvii.

ford, who was then Lord Lieutenant, and President of the Board of Governors and Guardians of the Hospital. What the "causa honoris" was, is uncertain; but Gilborne, in his poem of the "Medical Review," thus describes it:—

> "Sir Fielding Ould the sword of knighthood gained
> For saving ladies' lives in child-bed pained."

When a cockney wit of the present day suggested that a living accoucheur of eminence, if raised to the peerage, should be styled "Lord Deliver-us," he was probably unaware that a Dublin wit had, nearly a century ago, deprived him of the merit of originality by the following epigram on the occasion of Ould's being knighted:—

> "Sir Fielding Ould is made a knight,
> He should have been a lord by right;
> For then each lady's prayer would be,
> O Lord, good Lord, deliver me!"

His professional career was one of unusual length, extending from about the year 1736 or 1738 to 1788,—that is, over half a century, during which period he had among his patients many of our highest nobility. From certain facts with which I have been made acquainted by some of Ould's immediate descendants, I entertain no doubt whatsoever that he it was who attended the Countess of Mornington at the births of the Marquis of Wellesley, and of the still more illustrious Arthur, Duke of Wellington.

This distinguished honour has been claimed for Dr. M'Bride; but his biographer in the "Dublin Quarterly"[a] has clearly proved that there exists no grounds for such a supposition—nay, more, the Countess of Mornington does not appear to have been at any time a patient of Dr. M'Bride's.

Sir Fielding was the innocent cause of a very serious rupture between the University and the College of Physicians, whereby a connexion which had subsisted between these two bodies for more than sixty years was dissolved. How this came about was as follows:—In October, 1759, Mr. Ould presented to the College of Physicians a *liceat* from the University to be examined for a Bachelor's degree in physic.

This the College flatly refused to do, it being contrary to their by-laws and to their ideas of professional dignity that any of their body should practise midwifery. The University, notwithstanding, conferred an honorary degree in medicine

[a] Vol. iii. p. 290.

upon Sir Fielding, which act seems to have roused the indignation of the College to the highest degree. They construed it into a deliberate expression of contempt for their by-laws, an encroachment on their privileges, and an insult to their body at large. At a meeting of the College held February 5th, 1761, it was agreed that the University, in conferring a degree in physic on Sir Fielding Ould, had treated the College with very great and undeserved disrespect; and it was further resolved that the connexion subsisting between the College and the University, by virtue of the agreement dated July 25th, 1701, should be dissolved.

Not satisfied with these resolutions, they ordered a letter to be written to the Provost, the gist and purport of which are contained in the concluding sentence:—

"We do declare that for the future we will not examine your candidates, nor officiate at the performance of their public acts; and that we will receive into our College the graduates of other universities, if sufficiently recommended by their learning and morals, though not admitted *ad eundem* in yours."

Thus, you see, ended a compact which was framed in a rather illiberal spirit of monopoly, unworthy the dignity and abridging the usefulness of the two bodies. Both of them have, I think, good reason to feel obliged to the man who—indirectly and unwittingly, it may be—brought about its abrogation.

Sir Fielding Ould's residence was No. 21, Frederick-street, South. North Frederick-street, I may mention, was not then built,—the ground whereupon it now lies being an open space called "The Barley Fields." His house was pulled down some years ago, and its site is now partially occupied by the house No. 12, Nassau-street, which forms the east corner of this street and Frederick-street.

His death took place the 29th November, 1789[a], at his residence in Frederick-street; and he was interred in the burying-ground adjoining St. Anne's church. The date of his interment appears in the Parish Registry, but I have not been able to find any memorial tombstone or monument of him.

His professional income must have been very considerable for many years of his life; and there is no doubt he realized a respectable fortune from this source. He was married to a Miss Walker, of this city, by whom he had several children.

One of his descendants was good enough to place at my service the portrait in crayons from which the lithograph

[a] Walker's Hibernian Magazine, vol. xix. p. 672.

likeness accompanying this paper was taken. The fac-simile of his signature is from an autograph in my own possession.

In drawing a parallel between these two distinguished men, —Mosse and Ould,—we find that their histories present several points of resemblance and of contrast.

They lived at the same period; they practised the same branch of the profession; they were licensed by the same College; they both contributed (though each in a different manner) to found an obstetric reputation for this city; and the memories of both are to the present hour held in deep respect amongst us.

Such are the points in common between them: now observe those of contrast.

Mosse, on the one hand, is famous for having established a great practical school. To effect this, he zealously devoted all his time, his energies, and his fortune. He just lived to see this object achieved, and no more; he died in the prime of manhood. The grateful admiration of posterity, and "the blessing of those who are ready to perish," constitute his reward.

Ould, on the other hand, by his Treatise upon Midwifery, laid the foundation of the fame of this city in obstetric literature. His well-earned reputation gained for him an extensive and lucrative practice, and he acquired wealth by the honest exercise of an honourable calling, and died in the fulness of years.

Both these men are justly eminent, but their merits and their rewards are very different.

Sir F. Ould's Mastership terminated in the beginning of November, 1766. To him succeeded Mr. Henry Collum, who had been Assistant to Ould, and was the first person who filled this office. Mr. Collum was one of the Surgeons to Steevens' Hospital, and is thus alluded to in Gilborne's Medical Review:—

> "Who Collum calls is certain of a cure,—
> A skilful surgeon and wise accoucheur;
> Long did he govern kind Lucina's shrine;
> Oft re-elected, in that station shine;
> Where he presided with superior powers,
> Till crouded Business filled his vacant hours."

During his Mastership, and so early as the year 1770, the propriety of courses of lectures upon midwifery being delivered to the pupils of the Hospital began to engage the serious attention of the Governors: their object being, as would appear, not merely to render the system of instruction here more com-

plete, but to obtain for the diploma or certificate of the Hospital the force and authority of a regular license or degree in midwifery, such as was then the practice of the College of Physicians to issue.

For reasons which cannot now be clearly made out, the discussion of this question gave rise to a warm controversy, in the progress of which recourse was, as usual, had to the press, and several pamphlets were published, some approving and others denouncing this measure of instituting lectures here. Of these pamphlets, one, which took the affirmative side of the question, was entitled, "A View of the schemes at present under the consideration of the Governors of the Lying-in Hospital." No name was attached; but the author in the course of his remarks named an eminent contemporary physician, and called upon him, as a public man and known teacher of midwifery, to state openly his opinion upon the question at issue.

The physician so appealed to was Dr. John Charles Fleury. As the name of this accoucheur thus unavoidably comes under notice, I trust to be excused for making here a short digression to give a brief sketch of his life. He is deserving of this, as his name is honourably associated with the history of midwifery in this city.

Dr. Fleury was born in 1733, took his degree in Edinburgh in 1760, and settled in Dublin as a practitioner of medicine and midwifery. He was Physician to the Meath Hospital for twenty-three years, viz., from 1763 to 1786, when he resigned. For the last fourteen years he was Senior Physician to the Hospital. He gave several regular courses of lectures upon midwifery and the diseases of women and children; and to render these lectures practical, he was in the habit of attending with his class poor women in labour at their own homes. He commenced lecturing about the year 1761 or 1762, and discontinued in 1769. These lectures, curious to say, were delivered in the Anatomical Theatre of Trinity College, and with the sanction, though not by the authority, of the Board. The way this came about was as follows:—Fleury applied to the Board through Dr. Mercier, one of the Senior Fellows (and afterwards rector of Omagh), for permission to use the Anatomical Theatre as a lecture-room: which request the Board refused to grant "unless Dr. Fleury produced a testimonium or certificate, signed by the Medical Lecturers upon the College foundation" (who then were Drs. Hutchinson, Cleghorn, and Span), "that his proposed lectures were likely to be of use, and that they thought him qualified to give them;" which certificate they readily furnished.

All the researches I have been able to make upon this subject justify me in claiming for Dr. Fleury the merit of having been the first regular lecturer upon midwifery and the diseases of woman and children in this city. It is true, there was at this time, and from the year 1743, a Professor of Surgery and Midwifery attached to the College of Physicians; but there is good reason to believe that midwifery formed a very insignificant part of his course; and in 1785 it was superseded by anatomy. The only rival claim that I am aware of, is that of Dr. Edward Foster, whose posthumous work on Midwifery was edited by Dr. James Sims of London, and published in 1781[a]. But Foster was not elected an Assistant of the Hospital till July, 1772; and it is barely possible that he lectured on midwifery previously to this. Gilborne thus speaks of Foster in the Medical Review, published in 1775:—

> "Judicious Foster feels the latent pulse,
> To hidden maladies gives quick repulse;
> In parturition brings propitious aid,
> Each dame retrieves that has by him been laid.
> He teaches pupils, either sex apart,
> In learned lectures, his mysterious art."

The first lecturer upon midwifery in Edinburgh is supposed to have been Dr. Young, who gave private courses in or about 1751, and was elected Professor of Midwifery in 1756. He had two predecessors in this Chair, but neither of them lectured[b]. In 1770 Dr. Denman, in conjunction with Dr. Osborne, began to read lectures on midwifery, in London, having purchased the apparatus, &c., of Dr. Cooper, "man-midwife" to the Middlesex Hospital. The credit of having been the first public lecturer of midwifery in Britain is given by Denman to Dr. John Maubray, the author of "The Female Physitian," and of "Midwifery brought to perfection by manual operation." He endeavoured to make himself famous by decrying the forceps, and extolling the hand as a preferable means of assisting women in difficult labours. He gave lectures at his house in Bond-street, about the year 1724.

Dr. Fleury having been appealed to in the way I have al-

[a] The Principles and Practice of Midwifery. By Edward Foster, M.D., late Teacher of Midwifery in the City of Dublin: completed and corrected by James Sims, M. D. London: 1781; 8vo, pp. 316. This is a good treatise upon midwifery, and remarkable for the terse, aphoristic style in which it is written.

[b] For these and other interesting matters relating to the "Rise of the Edinburgh School of Midwifery," see Dr. Malcolm's paper in the Edinburgh Medical Journal, July, 1856.

ready mentioned, felt constrained to publish his sentiments upon the question, which he freely considered in all its bearings. His pamphlet is not less remarkable for elegance and clearness of style, than for the sound views which it contains, and the good sense which it discloses in every observation. He utterly rejects the idea that mere attendance at a lying-in hospital, and upon obstetric lectures, could make a man fit to practise midwifery. "The most enlightened professor of midwifery," he writes, "never can hope by the best digested course of lectures upon that subject to make a skilful accoucheur of one who has not a competent knowledge of anatomy, chemistry, in short, of all the præcognita of physic"[a].

Dr. Fleury was for many years an active member of the Medico-Philosophical Society[b], and communicated to it several papers of interest. One of these, upon "The Epidemic Cold of 1775," was thought worthy of being published a few years ago in the fifth volume of the Dublin Quarterly Medical Journal, and is well worthy of perusal. Of his other papers, two were on obstetrical subjects; and may therefore, be alluded to here. At a meeting of the Society, December 7, 1775, he read the history of a case of ruptured uterus, with complete recession of the child; and he lays it down as a maxim that "complete recession of the head after it has been for some time presenting, is a pathognomonic sign of a ruptured uterus." There is no doubt that of individual signs this is one of the most reliable; and it is much to the author's credit that this observation was made ten years before Andrew Douglas' celebrated monograph on "Rupture of the Uterus" was published.

In December, 1777, Dr. Fleury detailed to the Society, with great clearness, a case of retroversion of the uterus, occurring about the third month of pregnancy. It seems he recognised the true nature of the case, but it being the first of the kind he had ever seen, he called in the aid of his friend, Dr. Jebb, then Master of this Hospital, who replaced the womb; but in the course of some time after it fell down again, on which second occasion Dr. Fleury returned it himself, and the lady went to the full time. This case is interesting as having been, in all probability, the first of the kind here, in which the diagnosis was

[a] Probably the only copy extant of this able and well written pamphlet is one bound up in the thirty-ninth volume of "Pamphlets," in the Library of the Royal Dublin Society.

[b] This Society was established in 1756: many of the leading physicians belonged to it, and read papers at its meetings. Three large manuscript volumes of its Transactions are preserved in the Library of the College of Physicians. For a further account of the Society, see vol. i. of this Journal, p. xxviii., New Series.

established. Ten years previously, the first recorded case in England took place, and came under the notice of Dr. William Hunter; and during the decade which followed, only five cases seem to have been met with in all England.

I have in my possession a volume of MS. lectures, eighty-five in number, on Materia Medica, by Fleury; but whether these were ever delivered or not, I cannot positively say; I have good reason, however, to think they were. These lectures seem to have been prepared with much care, and by their sound practical teaching prove the author to have been a man of enlarged experience and accurate observation.

In November, 1784, Dr. Fleury was elected a Licentiate of the King and Queen's College of Physicians, "without examination or expense." If not the first, he certainly was one of the first practitioners of midwifery upon whom such an honour was conferred by this body.

Dr. Fleury lived in Stephen's-street, No. 51, and towards the latter end of his life in South Great George's-street, nearly opposite Exchequer-street. On his tombstone in the graveyard at Dundrum, county of Dublin, we read the following epitaph:—"Here lieth the body of John Charles Fleury, an eminent and ingenious Physician, whose cheerfulness and social wit rendered him the delight of his friends. He died suddenly, on the 29th of September, 1797, aged 64, universally regretted."

During the latter years of his life Dr. Fleury was nearly quite blind, and had retired from practice. He was an accomplished classical scholar, having been educated at a time when an intimate acquaintance with the dead languages, especially Latin, was indispensable to the physician. For many years of his life he never eat meat, and held the practice almost in disgust; he remained fixed in his vegetarian principles to the last. Dr. Fleury was never married.

Dr. Gilborne, in his "Medical Review," or "Panegyric on the Faculty of Dublin: physicians, surgeons, and apothecaries marching in procession to the Temple of Fame," thus speaks of this physician:—

> "Fleury can symptoms of diseases tell,
> Symptoms of symptoms can distinguish well;
> Assist the labours of the groaning wife,
> And saves the infant's and the mother's life."

Let me now return from this digression.

Although the Hospital Board determined in November,

1770, as we have seen, that the room off the grand hall (at present known as No. 9 ward) should be fitted up, and apparatus provided for lectures on midwifery and the diseases of women and children; and also that Dr. M'Bride would be a proper person for Lecturer,—yet the execution of these resolutions was delayed till the latter end of the year 1774, in the May of which year Dr. M'Bride was elected a Governor of the institution. At the request of Dr. Frederick Jebb, who was now the Master, and with the approval of the Board, Dr. M'Bride commenced lecturing here about the latter end of this year or the beginning of 1775.

Dr. Jebb succeeded Mr. Collum as Master in November, 1773; and was the first who resided in the Hospital. He was generally supposed to be the author of an anonymous work dedicated to Dr. M'Bride, and entitled, "A Physiological Inquiry into the Process of Labour, and an attempt to ascertain the determining cause of it" (Dublin, 1770). This book has become very rare; one copy of it is contained in the Library of the College of Surgeons[a]. The author candidly states in the dedication that "the principles of the work are the property of the ingenious M. Petit, King's Professor of the Royal Garden at Paris." Thus to renounce all claim to originality for his work is creditable to the author's candour: I must confess it raises him still more in my estimation to think that he did not originate the theory which the book contains, as it is about as great a tissue of gratuitous absurdity as ever was fabricated under the semblance of scientific truth! Indeed, I can say little for this Treatise. The only good thing in it is the entire rejection of the notion that parturition is effected, in any degree whatsoever, by the movements or efforts of the fœtus.

Jebb appears among the Doctors whom Gilborne poetically describes as "marching in procession to the temple of Fame;" and is thus introduced:—

> "There's Fred'rick Jebb who the Hospital commands
> Where pregnancy's relieved by skilful hands;
> An edifice magnificent and large,
> Kept up with splendour at the public charge.
> In France perfectioned in Lucina's ways,
> For happy births he's crowned with verdant bays."

In the winter of 1774–5 Dr. M'Bride began to lecture here and I have the authority of Dr. Collins for stating that he delivered several courses of lectures for the benefit of the pupils

[a] It is bound up in volume lxxv. of "Medical Tracts."

attending the Hospital[a]. It is more than probable, therefore, that he continued lecturing up to the time of his last illness in 1779. Dr. Jebb's term of office expired the year following; and Surgeon Henry Rock was elected Master. He died in office, as did Mosse, in 1759; and Dr. Pentland in 1826.

Rock was, I believe, a surgeon to Steevens' Hospital, but seems to have been chiefly noted for his obstetric skill, as Dr. Gilborne thus speaks of him among the surgeons of this (Steevens') Hospital:—

> "The matrons who rely on Henry Rock
> With safety can increase their tender stock:
> In time of danger his relief is good,
> He saves the mother and the infant brood.
> Fame in his praise employs her silver tongue;
> Nor will the Muses leave his acts unsung."

To Dr. Rock succeeded, in the year 1786, Dr. Joseph Clarke, whose name must ever hold a prominent place in the annals of this hospital, and among the obstetric celebrities of this city. To give any sketch of his life or writings would be wholly needless, as Dr. Collins' published Memoir of him must be known to all of you.

Dr. Clarke opened a new era in the history of the Hospital, and distinguished his government of it—firstly, by being the first Master to deliver courses of lectures to the pupils; secondly, by establishing an official registry of the names of pupils attending the practice of the Hospital; and thirdly, by introducing a plan of ventilating the wards, that has been productive of the most signally beneficial results.

Since then it has been the custom for each Master to give two or more courses of lectures in each year, in the discharge of which duty the Assistants generally take a part.

I must now bring this rather desultory address to a close. Of its many defects no one, perhaps, is better aware than I am myself. But when we go to gather up the fragments of the past, we must be content to take them as they come, without seeking to shape or connect them according to our wishes or ideas.

To contribute in any degree towards perpetuating the fame of those eminent men spoken of in this paper is to me a source

[a] Dr. M'Bride's biographer, in vol. iii. of this Journal, has not noticed the circumstance of his having lectured here upon midwifery. It is worthy of note, however, as showing his varied attainments, and the estimation in which he was held.

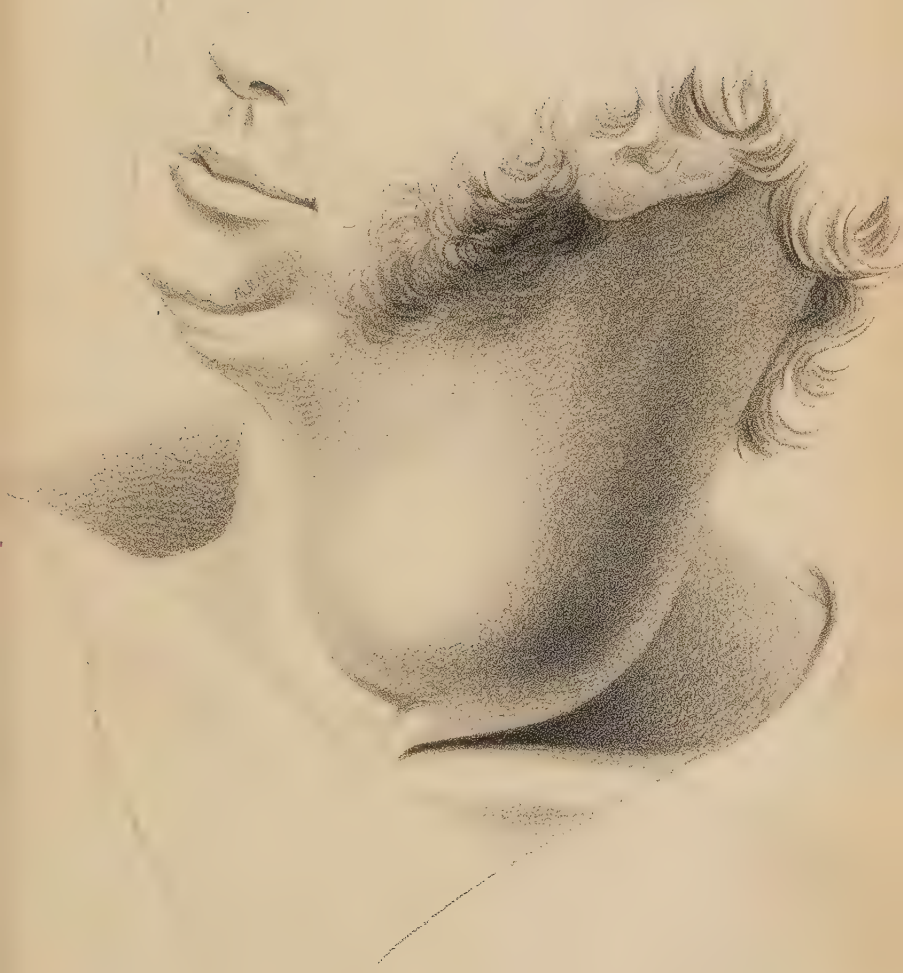
of much satisfaction. I trust, moreover, that in recalling their memories and achievements, I have not merely afforded you gratification, but have supplied to all of us fresh stimulus to co-operate in maintaining the character of that obstetric school of which they were the founders and most distinguished ornaments.

Art. II.—*A Remarkable Case of Carotid Aneurism, with extraordinary Complications*[a]. By S. Henry Hobart, A.B., M.B.T.C.D., M.R.C.S.E., Medical Officer, Cork Dispensary.

George Sinick, a baker, aged 40, was admitted into the North Infirmary, under my father's care, August 28, 1857, with aneurism of the carotid artery. On the left side of the neck there is seen an immense tumour, which, from its great size, and the absence of all redness on the surface, gives at first sight somewhat the idea of strumous abscess; on closer inspection, however, it is seen to pulsate very distinctly: this is quite obvious to the eye, and sufficiently denotes the nature of the tumour; still, the surgeon examining it is quite unprepared for the intense thrill that is felt over the entire surface on laying his hand on the part. On applying the stethoscope, and placing the ear within an inch or two of the other end, a remarkably loud bruit is heard, and when the ear is brought in contact with the stethoscope, the sound becomes quite painfully loud; it is, moreover, very distressing to the patient himself, who says that he feels as if he had a steam-engine at work in his head, which altogether prevents his getting a sound or refreshing sleep.

The tumour extends from half an inch to the right of the mesial line at the chin along the inferior maxilla, to a point about an inch behind the left ear, where its boundary is indefinitely lost; from this it passes downwards to a very short distance from the clavicle; it completely fills the digastric space (appearing to extend upwards under the maxillary bone); it also occupies the entire of the anterior superior triangle of the left side, as also the greater part of the inferior, and even extending considerably into the posterior triangles; superiorly it is on a level with the jaw, or is rather more elevated; posteriorly it is insensibly lost over the trapezius muscle; anteriorly also, at its upper part, it is badly defined, but its lower border

[a] Read before the Cork Medical and Surgical Society.



Forster & Co Lith. Dublin

is remarkably prominent; this part projects considerably beyond the level of the clavicle, being on about the same plane with the side of the face, and presents a rather pendulous appearance. When the head is well thrown back, the interspace between the tumour and the clavicle is something less than an inch, but when the head is in the erect position the interspace is reduced to a very deep groove of a quarter of an inch wide, and the least inclination further forwards causes the tumour to press against the bone; the sternal origin of the sterno-mastoid muscle is seen crossing this groove from below upwards and outwards.

He had been for several years a man of very intemperate habits, and twice suffered from delirium tremens. He was labouring under the second attack in February last, when, a desperate fight occurring between two of the men in the bakehouse, he rushed between them to interfere; he was in consequence knocked about and very severely handled; he was himself unconscious of having received any injury, but his friends say that he got a severe twist of the neck; there was, however, no wound or mark of violence; and when he recovered from the attack of delirium tremens sufficiently to judge of his own condition, he perceived no uneasiness or swelling, nor any reason to suppose that he was hurt about the neck or any other part.

About a month after this one of the workmen called his attention to a kernel in his neck, which he conceives must have come there during the night, as he did not observe it before: it was then about the size of a crow's egg; he could move it freely up and down in a direction corresponding to the mastoid muscle, and could actually pinch it up in his fingers. He is quite positive about this extreme mobility of the tumour, and yet even at this early period there was a decided thrill in it. Soon after this he began to be annoyed by strange sounds in his ear, which he was quite at a loss to account for. On one night he actually searched under the bed and about the room for a cat which he felt sure was making the noise, and it was on this occasion he discovered that the sound proceeded from the tumour itself: this was towards the end of May. The kernel, as he describes it, appears to have made its first appearance at a point corresponding to the bifurcation of the carotid, from which he conceives it first moved downwards to the clavicle, and has since been extending upwards and backwards; for the last three months it has become quite fixed, and has increased but little for the last month.

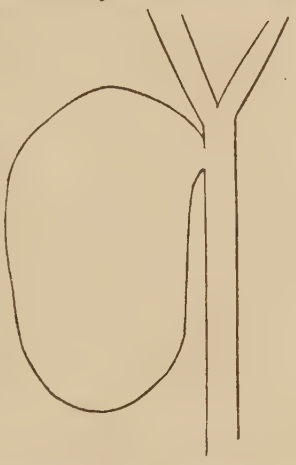
About a month since he had a severe attack of epistaxis, which lasted for an hour, and by which he lost at least a pint of blood. He has never had hemoptysis or severe cough.

Large as the tumour is, it does not interfere in the slightest degree with deglutition, respiration, or the sounds of the voice. The thrill is most intense and the bruit loudest at the posterior part of the tumour, at a point opposite the os hyoides.

On applying the stethoscope over the aortic valves, a loud bruit is heard, completely masking the first sound, while the second is distinctly heard, and appears to be quite natural; on moving a little to the right, the bruit is not quite so loud, and the first sound becomes faintly audible; at the apex of the heart both sounds are distinctly heard, the bruit still accompanying the first, but this is not nearly so loud as it is near the aortic valves. The patient has been trying all sorts of cures under the advice of sundry old women, who regarded it as an evil; it was only on casually meeting Dr. Dorman of Kinsale, a few days since, that he told him how serious a matter it was, and recommended him immediately to go to Cork and put himself under the care of Dr. Hobart.

On a consultation being held, the opinion of all present was, that the bruit heard in the cardiac region was merely that produced in the tumour, conducted along the great vessels, and that the heart and the aorta were either perfectly healthy, or, at least, were not affected in any way that would contra-indicate operative interference; but whether the case was one suited for operation in other respects, was a more doubtful question. The great size of the tumour, and its extending so far down in the neck, led to the fear that a considerable length of the artery was engaged, and that the small portion accessible for a ligature might not be found in a healthy state; besides which the difficulty of exposing the vessel in such a case must be very great, if not altogether impossible. For the following reasons, however, we hoped that the vessels would be found healthy: first, the tumour had first appeared at a point corresponding to the bifurcation of the carotid; second, the bruit was still most distinct, as was also the thrill and impulse, at the same point; and third, the lower part of the tumour was very prominent, so as to give the idea of a pendulous mass covered with skin; indeed, it looked as if the lower part of the tumour could be dissected off the subjacent tissue. Hence we concluded that the aneurism commenced very high up, and, soon becoming a false one, it had extended upwards and downwards, without involving any considerable length

of the vessel. The accompanying sketch will explain the condition supposed to exist. The next difficulty was how to come at the artery, for the ordinary mode of operating by means of an incision parallel to the vessel was quite impossible, as the tumour, reaching almost to the clavicle, left no room for such an incision below it, nor could we tell on what side of the tumour the continuation of the vessel might be found. It might be anterior, posterior, internal, or external, according to the aspect of the artery from which the tumour originally sprung. The only way, then, in which it could be accomplished was by a horizontal incision in the groove between the tumour and the clavicle, at right angles to the vessel: thus, however the artery might be displaced, it would still be exposed in some part of the wound. Accordingly, on the 3rd of September, my father, assisted by his colleague, Dr. Bullen, and myself, made an incision from the left side of the trachea for about three inches along the groove below the tumour; the greater part of the sterno-mastoid was divided, the clavicular fibres of which dipped very deep in the groove already alluded to, previous to again bending forwards under the inferior surface of the tumour, so much so that they might have been mistaken for those of the sterno-hyoid or sterno-thyroid muscles but for their attachment to the clavicle. On completely cutting through these fibres, and scraping away the subjacent areolar tissue, search was made for the above-mentioned muscles, as a guide to the vessel, but they could not be seen; on again clearing away as much as possible, and then passing the finger into the wound, the carotid could be felt pulsating, somewhat external to its natural position Very little further dissection served to expose the sheath, and a small opening being made into it, the aneurism needle was cautiously slipped round the vessel; it was seen to be perfectly healthy in appearance, lay at a very great depth, and directed its course towards the deepest aspect of the tumour, so that it could not have been reached by any perpendicular incision. The jugular vein, instead of overlapping the artery, could not be seen at all, having, no doubt, been obliterated by the pressure of the tumour; and the sterno-hyoid and sterno-thyroid



muscles were so pushed to the right, together with the trachea, while the vessel was drawn to the left, that they were not brought into view during the operation. On now compressing the vessel between the ligature and the tip of the finger, all pulsation and thrill were completely arrested in the tumour; the ligature was accordingly tied, and the lips of the wound brought together by two sutures. In the early stage of the operation a few veins which bled profusely and obscured the view had to be tied; much inconvenience was also occasioned from the man not being able to keep the head sufficiently back, as this position caused severe pain in the back of the neck; and whenever the head was raised in the least forward, it completely closed the wound, and he had on two occasions to be allowed to sit up so as to take a regular rest; it was also difficult to get a proper light to the bottom of the wound, on account of its depth, and the almost overhanging prominence of the tumour throwing a heavy shadow; but with regard to the direction of the incision being at right angles to the vessel, it appeared to afford at least as good a view of it and of the parts in its vicinity, as any incision parallel to it.

The patient was then removed to bed, and being restless and irritable after the operation, got half a grain of morphia. 8½ P. M. Very quiet, but has not slept.

4th. 10½ A. M. Slept last night with great comfort, having got rid of the steam-engine in his head; pulse 100. On placing the stethoscope over the cardiac region, the sounds are found to have undergone a wonderful alteration; for instead of the loud bruit heard all over it, particularly at the aortic valves, this has entirely disappeared, and the two sounds of the heart are found to be perfectly natural, fully bearing out the diagnosis arrived at previous to operation, that the bruit was solely caused by the sound conducted to the heart from the tumour, and was not dependent on any organic change in that organ. 8½ P. M. Complains of pain in the left temple, which appears of a neuralgic character.

5th. Going on well; pulse 110.

6th. Had a good night; tumour feels rather softer at its upper part; cold lotion to be applied.

7th. Had a good night; pulse 100; tumour decidedly softer; some vague sense of pulsation about it, but this is very obscure. 8½ P. M. No sign of pulsation; that of the morning must have been imaginary; tumour still softer, and is hot; cold lotion to be kept on the surface.

8th. Spent the night quietly, as usual; tumour cool, and natural in colour; a steady and unmistakable pulsation,

though very faint, which can be counted, and exactly corresponds with the pulse at the wrist. 8½ P. M. Pulsation in tumour has again almost disappeared.

9th. Tumour much softer, and fluctuation as distinct as in an abscess; pulsation cannot now be felt over its surface generally, but can be plainly discerned at its posterior and upper portion from the ear backwards.

10th. Pulsation in the upper angle of tumour is more localized than before.

11th. The pulsation felt behind the ear feels like some vessel becoming hypertrophied, so as to take the place of those cut off; no pulsation in any other part of the tumour, but it appears to be getting daily softer; one point anteriorly is slightly prominent, and is so soft, and the covering so thin, that the finger could be almost thrust through it; this point is also redder than the rest. I fear it will burst in a few days.

12th and 13th. No change.

14th. Prominent part of tumour getting black and very thin; the pulsation behind the ear can be defined as the occipital artery, supplied, of course, by the anastomosis from the one of the opposite side.

15th. Dark part of tumour getting larger and more prominent; the occipital artery is evidently increasing rapidly in size. Ever since the 7th there has been occasionally an obscure pulsation observed in the tumour, sometimes very vague, sometimes tolerably distinct, and at others altogether disappearing; two leeches were applied to the tumour, with a view to diminish the congestion of the thin portion of the surface, in hopes of delaying the bursting of the tumour for a few days.

16th. The ligature has come away during the night; no appearance of hemorrhage; wound looks healthy; tumour advancing to break, which it must now do in a day or two.

17th. Was summoned in great haste at 9 o'clock, being told that the man was sinking fast. On my arrival I found that the tumour had attained double its former size, that the skin over it was extremely tense, and that the surface was becoming vesicated. It was with the utmost difficulty the man could manage to breathe; the face was congested, and had a most anxious expression, the pulse galloping, and so feeble that it could not be counted. On my father's arrival, in half-an-hour afterwards, the man had rallied a good deal, and could breathe more freely; and as the case appeared to admit of a little delay, he summoned a consultation, waiting meanwhile by the bedside to watch for any change which might require immediate interference. It appears that this enlargement of the tumour

was very sudden, as Mr. F. Bullen, son of Dr. Bullen, who was the student in charge of the case during the night previous, assured us that there was not the least appearance of any change at 7 o'clock A. M., when he left him, and the man was not himself conscious of anything wrong until about half-past 8, when he felt as if something had given way, and soon after he found the tumour increasing, and a sense of suffocation coming on. It was decided in consultation, first, to introduce a large trocar to ascertain the nature of the contents; but from this only a few drops of very dark, semi-coagulated blood escaped. My father then laid the tumour open by a very free incision. A large mass of half decomposed coagulum now appeared. This was scooped out by the fingers, when the whole cavity was seen to be rapidly welling up from the bottom with bright arterial blood. I immediately plunged the index and middle fingers of both hands into the wound, and grasped the posterior wall of the sac between these fingers and the thumbs. On the blood being now sponged away, it was gratifying to find that the hemorrhage was commanded. On searching for the bleeding point, it was found to be about half an inch below the mastoid process, and very deep. It did not present the appearance of an artery cut across, but was rather a funnel-shaped fossa, from the bottom of which the blood issued. An attempt to take this up by means of the tenaculum entirely failed, as the broad end of this fossa could not be included in the ligature, and it would be impossible to get to the bottom of it when it was narrow. It was found, however, that pressure made just above the bleeding point controlled the hemorrhage, as well as on the orifice itself, showing that the vessel ran down from the mastoid region. A large curved needle was accordingly introduced by my father beneath the track of the vessel, that is, deeper than it, and brought out through the integuments behind; and the ligature, having been drawn through the needle, was again entered near its last point of exit, and brought out within the cavity at a point superficial to the vessel: thus it was included in the loop, together with a good deal of the surrounding tissue; and on tying the ligature, it was found to control the hemorrhage completely. So severe, however, had been the loss of blood on first evacuating the tumour, that the man was reduced almost to a state of syncope. The sac was now lightly stuffed with lint, and a bandage applied. A few minutes after, he got a fit of vomiting, which caused a considerable flow of arterial blood from the wound, although the part had been sponged quite dry just before. On removing the plugs of lint, they were found to be saturated

with blood, particularly those that were close to the ligature. The hemorrhage had, however, again stopped, and there was not even the slightest oozing to indicate where the blood came from; fresh lint was then introduced, and the parts were brought together by means of a suture, as a mode of keeping up some degree of pressure. 5½ P. M. Has been in a very precarious state all day, frequently turning up the eyes so as to expose only the white parts, and at the same time losing consciousness, and appearing to be dying; pulse very weak. He now got a severe cough, after taking a drink of beef-tea, and this brought on a renewal of the hemorrhage, which, however, did not amount to more than two ounces. 8½ P. M. Pulse very weak, and hemorrhagic; to get forty minims of laudanum; and wine and broth to be given liberally during the night.

18th. No return of hemorrhage, but there is a rather copious flow of a sero-sanguineous fluid from the sac, no doubt the secretion of the lining membrane mixed with a little blood. The patient has enjoyed great comfort since the tumour was opened, and has rallied wonderfully from the hemorrhagic debility.

19th. Doing well; discharge from sac almost colourless.

20th. A portion of the interior of the sac appears to be sloughing, but this consists only of the concentric layers of fibrine deposited in the aneurism, the discharge becoming purulent.

21st. Free suppuration; everything doing well.

27th. Cavity nearly filled up; all sloughs have long since separated; patient rather anemic.

October 2nd. Was progressing favourably until the day before yesterday, when he went out to dine with his sister, and in returning home he got a wetting; this has brought on inflammation of the left tonsil, so that he can scarcely swallow. He was given a purgative mixture and a gargle.

4th. The throat much worse; can scarcely breathe, and swallowing is quite impossible; he cannot open the mouth sufficiently to enable us to see the tonsil, but it can be felt with the finger to be enormously enlarged. My father plunged a bistoury an inch deep into it, but blood only escaped; this, however, flowed freely, and afforded great relief. The ligature was quite loose, and, appearing to cause a good deal of irritation, was now removed (by cutting one side of the loop and drawing on the other), though not without some difficulty, it being situated at the bottom of the remaining cavity, and being a good deal enveloped in granulations.

9th. The difficulty of breathing and of swallowing has been gradually subsiding since the 4th. The man, however, looks very badly; he has a sort of haggard, anemic expression, and there is still a good deal of fulness about the tonsil. 10 P. M. A sudden gush of arterial blood took place from the bottom of the cavity, which is now very small, so that it has not been thought necessary to use any plug of lint for some days, the wound being merely dressed with simple cerate. On our arrival the hemorrhage has completely ceased; it is described as amounting to about a pint; and the clots and stains on his clothes and the bed prove that it could not have been far short of that quantity. Patient says that he has suffered much all day from difficulty of swallowing and of breathing, but that this is now completely relieved, as he never felt his throat freer in his life. A small bit of lint was now slipped into the cavity; a pad was placed over this, and retained in its place by a strip of adhesive plaster.

12th. 6½ A. M. Was summoned suddenly to see him, in consequence of a renewal of the hemorrhage. On my arrival I found that a very considerable quantity of blood had been lost; that pressure at a certain point, immediately below the wound, completely controlled the hemorrhage; but on this being relaxed it immediately spouted out again, as if it came from some branch running up from the subclavian, probably the ascending cervical, but no sense of pulsation could be felt in the course of that vessel. The bleeding was kept in check by this means until 10 A. M., when pressure, however strong, or however directed below the wound, lost all control over it; but the finger placed on the wound itself had the desired effect; it was again held in check until 1 o'clock P. M., the hour appointed for consultation on the case. Just at this time the blood gushed out with increased fury, despite every effort on the part of the student who had been commanding it. The blood now evidently came from above, and its being controlled before must have been dependent on the dragging of the parts rendering the opening valvular. I immediately passed my finger to the bottom of the cavity, which was about an inch and a half deep, and just large enough to admit it. This cavity or depression ran upwards behind the angle of the jaw, and from the deepest part of it the blood evidently escaped; the bleeding vessel, however, could not be seen. In hope of bringing this into view, my father passed a bistoury to near the bottom of the cavity, and laid it freely open by dividing the sterno-mastoid muscle near its insertion. The point from which the blood escaped

could now be seen, not like a divided artery, nor was there a funnel-shaped fossa as was seen on laying open the tumour, but as if a wound or ulcer had opened into the side of a very large vessel; the orifice, judging from the stream of blood, must have been about the size of a No. 3 or 4 bougie, and emitted blood with terrific violence. On attempting to remove my finger so as to hand over the case to my father, so profuse was the hemorrhage that I was instantly obliged to replace it, while the blood, rushing out, produced a sound like water under high pressure issuing from a half-open cock. Under those circumstances, I was compelled to make an attempt to ligature the vessel in his stead, and, accordingly, while I controlled the hemorrhage with the index finger of the right hand, I took in the left a long needle, fixed in a handle, with an eye near its point, such as is used for ligaturing nævi; this I introduced unarmed internal to the bleeding orifice, and at a point higher up; then, carrying the handle towards the patient's right, caused the point to pass behind the vessel. It required considerable force to drive it on, until it appeared about half an inch behind the mastoid process; it was then armed, and, on being withdrawn, of course brought the ligature with it. The needle, still armed, was now introduced in front of, or superficial to, the vessel, and caused to pass out again through the same puncture as before; and then, being unarmed and withdrawn, both ends of the ligature were left at the puncture behind, so as not to interfere with the healing of the wound in front; the previous ligature having caused a good deal of annoyance to the patient, and having been rather difficult to remove, in consequence of its having been tied within the sac. On now tightening this ligature and removing the finger, the hemorrhage was found to be completely controlled, nor were there any symptoms indicative of the pneumogastric or other important part being included in it. Some inconvenience had also been experienced in the case of the last ligature, from the fact that it became quite loose in a few days, and that after this it made very slow progress in cutting through the mass of tissue included in the loop; to obviate this inconvenience, a small strip of wood was placed between the ends of the ligature, which were then firmly tied over it, somewhat on the principle of the quilled suture; so that, as often as the ligature became relaxed from the tissue enveloped in it cutting through, it might be again tightened by twisting the piece of wood. The man being blanched, and his circulation very feeble from loss of blood, was ordered broth and wine liberally during the day; 50 mi-

nims of tincture of opium were given immediately, and he afterwards got 30 minims every six hours.

13th. Not the slightest appearance of hemorrhage since; the man is wonderfully strong again, and has almost completely rallied from the loss of blood, got out of bed several times during the night to get drinks, make water, &c., without feeling the least tendency to syncope; the opium was discontinued, except a draught at night.

14th. Same way.

19th. No hemorrhage since, nor any bad symptom; the man sits up every day; the old cavity of the aneurism is all but filled up; the ligature has become a good deal slackened; the slip of wood was accordingly given two or three turns, which tightened it sufficiently, but caused some pain and uneasiness about the throat; this, however, passed off in about an hour.

21st. Ligature again tightened; it now caused a good deal more pain than it did on the 19th, and set the man coughing, as if something was tickling his throat, but these effects passed off as they did on the former occasion.

24th. On attempting to tighten the ligature to-day, so great a degree of pain and irritation was produced that it had to be desisted from, and fearing that some nerve connected with the larynx might be enveloped in the loop, it was deemed better to remove the piece of wood and leave the ligature quite loose, particularly as the former caused great annoyance by pressing on the excoriated skin; the knot had, however, become so enveloped in dried pus, that it could not be opened; the piece of wood was then cut short by means of a bone forceps, but even this operation produced a good deal of disturbance, and dragging of the ligature, which caused such irritation that the man was almost suffocated from the coughing and the spasm about the larynx, and finally, had a sort of pseudo-epileptic attack although the amount of violence applied was extremely slight, the piece of wood, of about a quarter of an inch thick, being easily cut, without almost any apparent disturbance of the ligature; a small poultice was applied so as to soften the pus with which the knot was enveloped.

30th. The bit of wood was easily got away to-day, but any attempt to withdraw either end of the ligature causes great irritation about the throat, so that even the slightest touch is quite intolerable. One side of the loop was accordingly cut, and it was left to work its way out.

November 4th. The ligature had moved about a quarter of an inch, showing that it is quite detached, and it now came away with a little gentle traction.

7th. Is now free from all irritation about the throat, but looks badly, his health having suffered from long confinement to hospital.

11th. Discharged cured.

December 10th. The man is doing well, and recovering his health and strength.

On looking over the report of this case there appear to be a few points which require some observations. The extraordinary mobility of the tumour in its early stage appears to be altogether inconsistent with its aneurismal nature, and I can only account for it by supposing that, previous to the development of the aneurism, some superficial tumour, as an enlarged gland, &c., had existed, which was rendered more prominent by the growth of the aneurism immediately under it, and from which it would receive an impulse; then, according as the aneurism became enlarged, this tumour would naturally be pushed downwards, answering to the description given by the patient, that the tumour first moved downwards, and if this then became absorbed, the aneurism would insensibly take its place, and thus appear to him to spread upwards.

Another point of interest is the fact, that after the ligature was tied, the contents of the sac did not become solid, or at least no attempt at organization appears to have been made. Next, the occipital artery opening into the tumour, and bringing such a supply of blood from collateral sources, as first to cause pulsation to be felt in the tumour, then to lead to a sort of rupture of the sac; and finally, on its being laid open, causing such profuse hemorrrhage.

These untoward results would incline one to think that, should other such cases arise, where a large aneurismal tumour does not become solid after tying the vessel which supplies it, and where the free anastomosis with other arteries would lead us to fear that collateral circulation might become established, which would bring a fresh supply of blood into the tumour, we ought to consider the advisability of either injecting with the perchloride of iron, or of applying the electro-puncture; for, though these agents have been heretofore tried with very doubtful results, we would, in such cases, have to deal with a mass of blood (for the time being, at least) nearly isolated from the general circulation; any clots formed could not therefore be broken down and removed, nor would there be any fear of the injected fluid itself passing beyond the tumour, and causing coagulation of the blood in the brain and other parts to which the continuation of the vessel might lead. Or again,

we may inquire, would it not be more prudent to lay open such a tumour immediately after applying the ligature, before any collateral circulation could have been established which might lead to dangerous hemorrhage. However, the hope that the tumour would become consolidated, and the unwillingness to add to the already great danger of the patient's position (with a ligature on the carotid) by laying open the sac, which must necessarily lead to considerable inflammation in the immediate neighbourhood of the ligature, will, I imagine, in most cases, prevent this last suggestion from being carried into practice; nor does such an operation appear entirely free from the danger of severe hemorrhage, as the anastomosis at the circle of Willis is so very free, that it appears by no means impossible a considerable quantity of blood might be lost before a second ligature, almost as difficult of application as the first, could be secured; moreover, this blood being drawn directly from the brain, just when it had been deprived of nearly a third of its natural supply, might be attended with very serious consequences.

The fact that the occipital artery communicated with the sac in this case may be considered as proof that the aneurism had originated very high up; in fact, it must have embraced that portion of the external carotid from which the occipital was given off, and hence we were inclined to suppose at this period of the case, that it had not sprung from the common, but from the external, carotid. The last hemorrhage, however, appeared as if the internal carotid was also involved, as it in this case came from a point exactly corresponding to the course of that vessel, being almost as high up as the base of the skull, and so deeply situated that, in endeavouring to pass the needle behind the vessel, its point first struck against the vertebra, and afterwards, in forcing it out through the integuments behind, it came against the mastoid process, and it was by no means easy to depress the point sufficiently to guide it clear of that bone. This must evidently have been the internal carotid, which was probably prevented from bleeding before by some imperfectly organized coagulum, and hence we may conclude that the disease originated at the bifurcation, and as it enlarged, while still a true aneurism, it involved some extent both of internal and external carotid, so that, if the parts could be examined, those two vessels, as also the early branches of the external carotid, would appear to have sprung from the tumour itself.

Another point of no small importance was the apparently total obliteration of the jugular vein; this was a matter of consi-

derable advantage in the first operation, as it removed one of the greatest difficulties and dangers; its non-appearance at this time, however, might have been dependent on its being merely compressed by the tumour above, in which case it would have recovered its permeability after that pressure was removed; but, had that occurred, and had the vein existed at the time of applying the last ligature, it appears all but impossible that it would have escaped being perforated by the sharp-pointed needle by which the artery was secured, and had it even escaped this, and been all included in the ligature, what prospect would there have been of adhesion, inflammation being set up at this point, and no phlebitis setting in, particularly in the unhealthy, debilitated condition in which the patient then was.

Art. III.—*Observations on the Use of the Shower-bath in Delirium Tremens, and other similar Cases of Cerebral Excitement.* By Robert Law, M. D., Professor of the Institutes of Medicine in the School of Physic in Ireland, &c.

The following observations were made when delirium tremens was a very common disease amongst us. Subsequently "the Temperance Movement" produced such a change in the habits of our countrymen, among whom this disease chiefly prevailed, that an instance of it seldom presented itself to the physician. I felt that the time for the recommendation of any therapeutic agent applicable to the disease had gone by. But, unhappily, the effects of the Temperance Movement were but temporary. Intoxicating liquors are now as freely used as they ever were, and delirium tremens is now as common as it ever was, and a remedy of any value in it is now as well deserving of being made known as it ever was.

It will be readily admitted that in no case, and under no circumstances, does cerebral excitement assume so formidable an aspect as it does not unfrequently in delirium tremens, and there is no case where high excitement is oftener attended with speedily fatal collapse. I shall not soon forget a case which supplied me with an illustration of this fact. I admitted into the hospital a young man whose friends, that accompanied him, declared to be affected with delirium tremens. He answered questions most coherently, and in such a way that I should have doubted the truth of their statement respecting him, were I not well aware how often the disease is suspended during the day to break out with violence at night. This proved to be

the case in the present instance: the person so tranquil during the day became so outrageous at night that he was obliged to be placed in a separate apartment, and required the porter to remain with him to keep him quiet. About midnight he made a strong effort to get out of bed, but after a long struggle the porter succeeded in mastering him, and left him, as he supposed, disposed to sleep. He returned in two hours, and found him quite dead. Nor is this a solitary instance, in my experience, of sudden sinking very speedily following upon the excitement of delirium tremens. The delirium caused by the excessive or continued use of ardent spirits has long since proved itself refractory to the treatment ordinarily and successfully employed against it when occurring under other circumstances, and in other diseases. Although opium may be considered to be its general remedy, yet many are the cases in which it not only fails to be useful, but, I am persuaded, has been productive of positive mischief. Tartar emetic, either alone, or combined with opium in varying proportions, although it, too, has often been successfully employed against it, yet, in many instances, has disappointed my expectations. It was the failure of these means, and the feeling of the necessity of adopting some means calculated to produce an immediate impression upon a disease that did not admit of delay, that suggested to me the shower-bath. Nor was it alone in cases of pure delirium tremens that I used it, but also in the delirium of fever, in persons addicted to the use of ardent spirits. I shall now detail some cases to exhibit the effects of it.

Case I.—Frederick Bridge, aged 32, writing-clerk, admitted into hospital January 31st. For a week previous to his coming into hospital he exhibited a peculiar fidgety, restless manner, and, three days ago, when getting out of bed, he fell down in a fit, attended with convulsions, from which he soon recovered, and into which he relapsed three times at very short intervals. He is reported not to have slept for several nights. He is said not to be a determined drunkard, but has seldom confined himself within the strict limits of sobriety. He was reported to have passed the night previous to his admission, running through the house, hunting animals, the creatures of his disordered imagination. Phenomena on admission: —Pulse 126, feeble; skin cold and clammy; a restlessness of manner. He has no headach, nor suffusion of eyes, nor flush of face. Tongue clean and tremulous. He has a general tremor of the body. He was ordered to take a table-spoonful of the following mixture every hour until sleep resulted:—Cam-

phor mixture, five ounces; muriate of morphia, two grains; spirit of nitrous ether, two drachms; and syrup of lemons, six drachms; and to have a tumbler of punch, his favourite beverage.

February 1st. He was very much excited during the night, and scarcely remained an instant in bed, pulling and tossing everything about. Pulse fuller and stronger; head hot; he has taken one bottle of the mixture, and half of another, without exhibiting the least appearance of being under its influence. To have six grains of tartarized antimony added to the mixture. Let him have a cold shower-bath immediately.

2nd. 11 o'clock A. M. He is in a most tranquil sleep, without any stertor. He got the shower-bath at 4 o'clock yesterday, and almost immediately afterwards fell into the sleep in which he now is. 1 o'clock P. M. He has now just awoke; his mind is quite collected; he has no headach, no tremor of the body; pulse 90, soft and regular. He has, in a very remarkable degree, the peculiar fusty smell which we so often perceive in such cases. In order to make assurance sure, I directed his medicine to be repeated.

3rd. He continued perfectly composed, without even any confusion of mind, and has had a quiet, tranquil night.

4th. Convalescent.

Case II.—James Connor, aged 42, an habitual drinker of ardent spirits and punch, but seldom to intoxication, was admitted into hospital, late yesterday evening, April 27. He raved incessantly all night about his occupation of clothes-vender. Present phenomena:—Pulse 114; skin moist and clammy; eyes suffused; tongue covered with whitish slimy mucus; head hot; bowels torpid. He has had leeches applied to his temples before admission. He was ordered to take an ounce of the following mixture every third hour:—Camphor mixture, seven and a half ounces; tartar emetic, four grains; vinegar of opium, twenty-five drops; and spirit of nitrous ether, half an ounce. A cold shower-bath immediately. Should his condition be not improved towards evening, let six leeches be applied behind each ear, cold wash to the forehead, and his legs be stuped.

28th. He has had a most quiet, undisturbed night, without any delirium. Immediately after he got the shower-bath he fell asleep, and slept for three hours. When he awoke he requested to have the shower-bath repeated, and, after getting it, he again fell asleep, and did not awake through the night. He got the medicine but twice, nor was anything else done for

him. Pulse 120; tongue white and slimy. I neglected to mention that he was ordered a turpentine enema, which freely affected his bowels. To take an ounce every third hour of the following mixture:—Camphor mixture, seven and a half ounces; spirit of nitrous ether, half an ounce.

29th. He slept well through the night; pulse less frequent; tongue cleaner.

May 1st. He perspired freely through the night; tongue quite clean. Convalescent.

Case III.— An elderly man, Reilly, had been under my care in hospital for some time, labouring under an obstinate cutaneous affection, when he exhibited symptoms of fever which prevailed in an epidemic form at the time. When I came to see him in the morning, the nurse told me that he had not slept an instant during the night; that his tongue had been going incessantly, uttering the most incoherent nonsense. I found him in the same loquacious mood. His face was flushed, and eyes suffused; skin hot and dusky; pulse very rapid and small; tongue red and dry. For a short time previous to the exhibition of these symptoms he had been affected with diarrhœa, which had yielded to medicine. Reilly's habits not having been the most temperate, coupled with the character of his delirium, led me to regard his case as one of the prevailing epidemic typhoid fever, modified by delirium tremens. I accordingly directed for him the following medicine:—Camphor mixture, seven and a half ounces; spirit of nitrous ether, three drachms; vinegar of opium, thirty drops; tartar emetic, one grain; mix: two table-spoonfuls to be taken every third hour. Shower-bath immediately. As I apprehended that he would be chilled by the bath, I directed for him a hot drink immediately afterwards and a jar of warm water to be applied to his feet. He was seized with a slight rigor, but which soon ceased. In a very short time after he had the bath, and had taken one dose of the medicine, he fell asleep, and awoke with his mind quite composed, after having had four hours of refreshing sleep. He now went regularly through a tedious fever, but had no return of delirium. His exhaustion was extreme, and he required to be supported by stimulants, wine, ammonia, &c.

Case IV.—James Nugent, aged 34, locksmith, admitted into hospital June 13, exhibiting the following symptoms:—Pulse 130, full and strong; tongue clean; a nervous tremor of entire body; profuse general perspiration; eyes not suffused. He had been but a very short time in the hospital when he became

so violent as to require to have the strait waistcoat immediately put on. The account that the friends who accompanied him to the hospital gave of him was, that he had been drinking for several days, and afterwards, while at breakfast, he was suddenly seized with a kind of fit, and lost all consciousness; his stomach then became sick; he had a return of the fit, and then became delirious. He was ordered to take every third hour an ounce of the following mixture:—Camphor mixture, five and a half ounces; tartar emetic, six grains; spirit of nitrous ether, three drachms; tincture of opium, thirty drops; mix. Cold shower-bath immediately, and let it be repeated in the evening, if necessary.

14th. Pulse 78, soft. He is perfectly tranquil and collected at present, and quite conscious of his position. He felt immediately refreshed by the shower-bath. His skin is cool; eyes slightly injected. The medicine caused no sickness. The mixture to be repeated; the tincture of opium to be diminished to twenty drops.

15th. Pulse 78. He is quite collected, and slept well during the night.

16th. Is quite well.

This individual came under my care again under similar circumstances, and so conscious was he of the benefit he before derived from the shower-bath, that he begged he might have it again. His request was complied with, and with as beneficial effects as before. He became perfectly quiet, and slept.

Case V.—John Maguire, aged 35, of intemperate habits, was brought to the hospital in a state of the highest excitement. The account given of him by his friends was, that he had been labouring under a violent pain in the calf of his left leg, which seized him suddenly, without his having received any external injury; that he had applied to a surgeon, who directed for him a liniment which he rubbed to his leg; that the pain left his leg, but he was soon after seized with pain in the head, and then became violently excited. Of this excitement there had been no abatement from the time of its commencement until he was admitted into hospital. We were obliged to put the strait waistcoat on him immediately to control him, as otherwise it would have been utterly impossible to have kept him in bed. His appearance exhibited great wildness, nor would he give us the least information as to whether he felt any pain or uneasiness. I directed a cold shower-bath for him at once, and ordered him to have the following mixture:—Camphor mixture, seven ounces; tartar emetic, four grains; sedative liquor

of opium, thirty drops; syrup of saffron, one ounce; mix: one ounce to be taken every third hour. After he got the shower-bath the strait waistcoat was not again put on him, nor was there any necessity for it; he became perfectly tranquil, and confessed himself relieved from a most distressing headach, which he now admitted that he had. After about four hours he felt the pain of his head returning, when he requested that he might again have the shower-bath. It was repeated, and shortly afterwards he fell asleep, and enjoyed a night of uninterrupted rest. He had no return either of headach or delirium; and in a few days he was quite well.

I shall content myself with the details of one more case, which strikingly proved the tranquilizing effect of the bath when the patient was under the highest degree of excitement.

Case VI.—Matthew Jones, aged 45, waiter in an hotel; of intemperate habits, although he was reported not to have exceeded lately; for a week previous to admission, was under treatment for an affection of his chest. I had no opportunity of seeing him until the day after his admission into hospital, when I found him in such an excited state as that with difficulty could he be kept in bed. He had been constantly getting up in quest of whiskey. He had no sleep during the night. His eyes were suffused; expression peculiarly wild; pulse 108, full and strong. He talks incessantly about his occupation as a waiter. I ordered him a shower-bath immediately, and afterwards to have the following mixture:—Muriate of morphia, two grains; camphor mixture, seven ounces; spirit of nitrous ether, three drachms; syrup of saffron, five drachms; mix: two table-spoonfuls to be taken every third hour. He offered the most violent resistance to the shower-bath; however, the porter, after having received some hard blows from him, succeeded in giving it to him. He became perfectly quiet after it, and remained so for three hours, when he again became excited; the shower-bath was repeated, when he again became quiet and fell asleep, and awoke in the morning perfectly sensible. He had no return of delirium through his illness, and recovered so much that I indulged a hope of his final recovery; however, I soon perceived the fetor, both from his breath and from the sputa, that announced gangrene of the lung, and discovered a large cavity, indicated by pectoriloquy, gargouillement, and cavernous respiration under the right clavicle. He soon began to sink, and died about ten days from the time of his admission into hospital. Examination of the body exhibited a large cavity, whose internal surface was irregular and

sloughy, and which occupied the entire of the upper lobe of the right lung. The left lung was quite healthy.

I deem it superfluous to adduce more cases to prove the efficacy of the shower-bath in allaying cerebral excitement, and procuring sleep in delirium tremens. Nor is my experience of its value confined to pure delirium tremens; I have found it no less efficacious in the delirium of fever, when the subject of it has been of intemperate habits, and in whom the fever has been modified by the delirium tremens. In some of these cases, where there has been much prostration of strength, and the pulse very feeble, I have deemed it a measure of prudence to have at hand either a stimulating draught, composed of camphor mixture, ether, and aromatic spirit of ammonia, or hot punch, or mulled wine, to give to the patient immediately after his getting the bath, to prevent an injurious chill, and to promote reaction. I also have directed a jar of warm water to be applied to the feet, and the legs to be wrapped in hot flannels. With these precautions I have not seen a single instance of injury resulting from the bath, and have proved its most beneficial effects even in cases in which the fever has been of a low typhoid type, with the surface covered with petechiæ. Nor have I been deterred from using the bath when an affection of the chest has been present; I have only in such cases thought it prudent to have the chill taken off the water. In many cases I have found it necessary to repeat the bath from the excitement only being suspended by its single administration; and even in some cases, when the excitement has not returned, but has left behind it a wakefulness, I have found its repetition procure sleep. The patient generally experiences great relief from it. Maguire felt that the violent pain of his head at once left him after it. When the shower-bath could not be so readily procured, or where some circumstance connected with the patient hindered his getting it, I have derived considerable advantage from pouring a large quantity of cold water on his head held over a vessel placed beside the bed. I am not aware of the shower-bath having been employed under the circumstances that I have here recommended it. And I do venture to recommend it with the utmost confidence. Nor need its use interfere with any other means that we may wish to employ. We can, at the same time, exhibit either opium simply, or combined with tartar emetic, as the circumstances of the case may seem to require. I would attribute the advantage of the bath in these cases to its threefold effect, viz., first, the shock; second, its diverting from the head; and third, de-

termining to the surface generally. I impute no small share of the benefit to the shock; it produces a sudden and strong impression, and seems, as it were, to cause a revolution in the train of morbid action; while the sedative effect of the cold applied to the head relieves it, and from a partial produces a general determination to the surface, and thus restores the balance of the circulation.

Art. IV.—*Observations on the Pathological Relations of local Gangrene to constitutional Gout, exemplified by circumscribed Sphacelus and an extensive Carbuncle situated on the cervico-occipital Region; complicated with well-marked Gouty Diathesis and antecedent Cerebral Disease.* By T. Hawkesworth Ledwich, M. R. I. A., F. R. C. S. I., Lecturer on Surgical Anatomy, and Demonstrator of Surgical Operations in the School of Anatomy, Medicine, and Surgery, Peter-street.

Mr. W., a large, well-built man, aged 75, of a sanguine temperament, had during his life been comparatively healthy, with the exception of occasional attacks of *abortive gout*,—which, however, failed to develop themselves in any special locality until within the last three years, when loss of memory, occasional rigidity of the extensor muscles, with vertigo, and deficiency of controlling power in progression, indicated but too plainly the insidious advances of senile softening of the brain. But, although incapable of any continued sequence of special ideation, still he possessed a tolerable amount of rational power, and quite sufficient for the social exercises of ordinary life amongst his own family. In last February he was attacked with a severe form of phreno-meningitis, which required active treatment in order to subdue the violence of its symptoms; and although his recovery from this malady seemed at first to be both perfect and complete, yet after some time his intellect periodically exhibited an increasing degree of confusion of ideas, accompanied by cerebral excitement and intermittent pulse. The power of directing and controlling muscular movements still continues to diminish, but as yet there is no absolute paralysis, although the spastic rigidity of the muscles would indicate that such a termination may with certainty be anticipated at no very distant period. For some time he has exhibited an insuperable objection to rise from his bed for several consecutive days, being indisposed to expose his feeble condition, or incur the labour of dressing. His appetite has been good, and he retains a fair development of adipose investment, notwith-

standing a morbid fancy that he possesses for the consumption of purgatives, which he gratifies to an incredible extent, but long habit seems to have rendered them powerless to influence the system. He is accustomed to lie continually on his back, with the neck, which is remarkably thick and broad, resting on the pillow, so that it has frequently occurred to me to notice deep irregularities in the skin of the cervical region produced by this peculiar mode of decubitation.

On the 8th of November, 1857, my attention was called to a small tumour below the occipital crest, just impinging on the commencement of the neck. It was fixed, hard, painful, but without any particular discoloration of the surface. He has been restless, with burning pain in the epigastrium, for the last three days; urine high-coloured, dense, but without deposit, acid reaction, and small in quantity. Anticipating anthrax, I placed French cotton moistened with turpentine over the tumour, and occluded the whole with oiled silk; and, as there were no urgent constitutional symptoms present, waited patiently for events.

10th. The tumour is now the size of an orange, of a dusky colour and brawny hardness; pulse 90; skin hot and dry; tongue clean, moist; appetite good; bowels constipated; extremely restless, and complains of want of sleep; urine still dense and dark, saliva presenting an acid reaction. A crucial incision, one inch and a half in each direction, was effected, and suffered to bleed for an hour. The wound to be poulticed for the present; and he was ordered an aperient draught, with twenty-five minims of the wine of colchicum.

12th. The carbuncle continues to spread to either side, measuring now six inches in diameter. The central incisions are dry and glossy, with but slight retraction of their edges; pulse 100, rather feeble; tongue moist, *clean;* loss of appetite; bowels torpid; urine unaltered. *There are no head symptoms*, but the extreme restlessness and insomnia combine to render the prognosis unfavourable. The incision was prolonged through the left side of the tumour, leaving the right untouched; turpentine with cotton was applied instead of the ordinary poultice. Ordered a bark mixture, with three drachms of acetate of potash, to be taken in the twenty-four hours. Nutritious diet; six ounces of wine; aperient draught, with colchicum.

14th. The left side still spreads, notwithstanding the free incision, and threatens to involve the ear, but the right side is stationary, with maturated pustules on its surface, so indicative of the disease. All the constitutional symptoms are without

variation. Ordered to apply turpentine and cotton to the whole tumour, and continue the medicines as before.

15th. He is much better to-day, notwithstanding that he has passed a sleepless night. Pulse 94, full; tongue moist, clean; profuse perspiration during the night; urine presents *a copious deposit of uric acid;* intellect perfectly clear. The incisions are now suppurating healthily, with an evident decline of the livid colour in that portion which was not incised. Ordered to continue all treatment as before.

17th. Still improves; the whole right side of the tumour has subsided, and the cribriform apertures have healed, whilst on the left the disease declines but slowly, although sloughing is but trifling. To continue treatment as before.

19th. The whole right side of the anthrax is well, the central crucial incision being surrounded by healthy granulations, but the incision on the left side gapes, and is far behind the right in reparative progress.

24th. The wound is now healed, and he expresses himself as feeling much improved in every respect. Ordered to return to his accustomed dietary, which is lightly nutritious.

On the first of December Mr. W. again complained of restlessness, burning in the epigastric region, and loss of appetite, with thirst, dry skin, sensation of fatigue, the urine being again dense and high-coloured. Again I subjected him to the depurating influence of potash salts; and on the 4th my attention was called to *a spot about the size of a shilling, perfectly black in colour,* situated on the outer and back part of the leg, where the tendo Achillis commences. The cuticle has become detached, and the part is dry, insensible, with absence of pain in any part of the limb either during night or day. The toes and feet are sound, maintaining a mean temperature of 96. Until the 8th the deep livid discoloration continued to spread, with total death of the centre; when again the secretions became abundant, and a line of demarcation set up, separating a portion of skin about the size of a crown-piece, arid, dry, parched, or mummified. I applied a chloride lotion with tincture of myrrh, covering the part with oiled silk, and enveloping the limb in a thick layer of cotton, also administering bark and potash, with wine in small quantities, until the ulcer showed symptoms of healing, a condition almost accomplished on the 20th. Since that, he has had no further local or general inconvenience.

There are many points of interest which relieve the narrative of this case from the imputation of being a literal transcript

of carbuncle, as it manifests itself in ordinary practice, where, possessing an undeviating series of progressive changes in its several stages, exact plans of treatment and precise instructions have been laid down to meet those indications which may, with certainty, be predicated, in obedience to the rules of practical surgery. But the whole history of the case proves that there may be exigencies contingent on particular complications which demand more than ordinary attention, and render each individual instance of any given disease the legitimate subject for special investigation, constituting, in fact, a separate and distinct subject of clinical study. I, therefore, purpose to draw particular attention to the most prominent features of the case, and the probable association of the malady with the circulation of a specific blood poison. In the Dublin Quarterly Journal of Medical Science for November, 1856, I first expressed a conviction of the frequent connexion subsisting between gouty diathesis and anthracoid disease, adducing a well-marked case to confirm those views. It is, therefore, gratifying to find that M. Marchal (De Calvi), as quoted in the Medical Times and Gazette of February 14, 1857, has made a report to the Academy, enforcing the opinion that the uric acid augmented in gout acts as a poison on the capillaries, inducing an obliterating arteritis which becomes the cause of sphacelus, and insists on the external and internal use of alkalies as the treatment most likely to be successful in those cases, which he believes are rather common in England. As further confirmation of these facts, the whole history and progress of Mr. W.'s case becomes valuable evidence in illustrating the pathological association existing between an excess of uric acid in the blood and the local causation of gangrene; for although the occurrence of mortification, more or less extensive, was early recognised in diabetic blood-tainting, and an exact appreciation of its cause fully entertained by the profession, still, a much more fruitful source of various unhealthy forms of inflammation remained unnoticed, until recent researches have proved the accuracy of opinions that at first seemed merely theoretical in their nature, and unimportant in their practical relation to disease. However, it is more than probable that a brief analysis of the foregoing case will serve to dispel illusive opinions entertained as to the simplicity of therapeutics in connexion with *external diseases.*

Before the manifestation of any local disease, this patient exhibited the restlessness and querulous tendencies so indicative of approaching gout, and this, associated with burning sensation at the epigastrium, acid saliva, dense urine of a high

specific gravity, intensely acid, contributed to confirm the diagnosis. All these symptoms maintained an increasing severity coincident with the progress of the local affection; and when a crisis of the irregular gout fit appeared, evidenced by profuse sweating and the secretion of urine in large quantity, depositing a copious sediment of uric acid, the local malady immediately diminished in its severity,—both the constitutional and local symptoms presenting a similar amount of alleviation. The inference amounts almost to a certainty that a specific condition of the constitution modified the local symptoms and influenced their progress. Assuming this view to be based on rational observation, the therapeutics of the case became manifest, and the result fully justified the large introduction of alkalies with bark, as, the moment the system became impregnated with the salt, all the symptoms began to yield with rapidity and safety. The locality and extent of the carbuncle, complicated with preceding cerebral symptoms, attached a certain degree of gravity to the probable event; but, notwithstanding the unfavourable opinion of Sir A. Cooper as to the result of such cases, this patient never, during his illness, exhibited the slightest tendency to delirium, although the local affection could hardly have been more severe. Still the cerebral complication exercised a considerable influence as to the treatment that might have been pursued under more favourable circumstances, and naturally led me to fear the administration of opium, for which, as a therapeutic agent in gangrenous diseases, there is no reliable substitute; and although restless days and sleepless nights augmented the patient's sufferings, I was compelled to depend on the spontaneous exhaustion of nervous irritability as the only safe and possible substitute for the proscribed narcotic. It was not without a justifiable hesitation that the experiment of leaving one spreading side of the tumour to nature's own efforts was adopted, and the application of turpentine substituted for the usual treatment; but as there was already a free central crucial incision, fully commanding the source, as well as the second side of the disease, I felt confident that mischief could at any moment be averted; and although the customary pustules formed and discharged their contents, yet *the areolar tissue did not slough beneath the affected skin;* but the disease subsided here even whilst it continued its ravages on that side which was freely incised. Whilst, therefore, the result of this case would indicate that a free crucial incision, commanding the centre of the tumour, is essential, it would also prove that the extension of those incisions, if it does not favour diffusion, certainly fails to arrest the progress of the inflammation, or avert sloughing,

thus rendering repair more tedious subsequently. To the local application of turpentine some benefit may be attributed as a useful stimulant, but that it exercises any specific influence on the disease seems to be a perfectly gratuitous assumption; it may, however, be employed, even undiluted, in an early stage of anthrax, and I think that it tends to diminish the severity of the pain at that period, and this is a relief of no small amount in many cases where the irritable temperament prevails. The substitution of cotton wool for the ordinary poultice will be found to act most beneficially for the patient's comfort, as the continued weight of the ordinary cataplasm on the posterior cervical region constitutes one of the most serious annoyances to which a querulous patient can be exposed, and it is fortunate that every indication fulfilled by the poultice, such as occlusion, heat, and moisture, are equally, if not better, answered by the more light and cleanly preparation of cotton wool.

The urine through the whole case was essentially gouty, being at first high-coloured, dense, but devoid of sediment, but subsequently depositing lithic acid in abundance, with a concurrent diminution of the more violent symptoms. A careful examination of this fluid was instituted microscopically, to determine the presence of oxalate of lime, or, at a later period, urinary "torulæ," but without success. A second specimen of the fluid, being *an admixture of portions passed on three separate days*, was submitted to an elaborate analysis by Professor Cameron to seek for sugar, and in a communication to me on the subject he states:—"There is not a trace of sugar in the specimen you sent to me for examination." Associating this with my previous observations, I must consider saccharine urine as being rather an exception in association with anthrax. The second attack of local gangrene, preceded by well-marked symptoms, subsiding with their mitigation, thus following the history of the first disorder, confirms the views entertained of the case from the commencement, and exhibits a striking point of interest, consequent, apparently, on its locality,—that the poison which produced carbuncle in a part of comparatively high vitality, became the exciting cause of *dry gangrene* in a more remote region, where the circulation must, of necessity, be more or less languid and indolent at such an advanced period of life.

Art. V.—*Strychnia and its Uses.* By H. R. de Ricci, Esq., Ballymahon.

For many years past I have employed nux vomica and its preparations in a great many different forms of disease. As might have been expected, I have found it injurious in some cases, useless in many others, but in those cases in which subsequent experience has shown its use to be indicated, I have found it most beneficial.

Having been in charge, for the last seven years, of an hospital containing 100 beds, and of a dispensary having an annual average attendance of 500 patients, I have had ample opportunity, not only of administering this medicine very extensively, but also of watching and studying its effects. The results, therefore, of those experiments which I now lay before the profession may be received, not as the crude, undigested theories of a fanciful imagination, but as the fruits of long-continued researches and carefully conducted investigations, undertaken and carried on for the purpose of ascertaining the true therapeutic value of a medicine which, however much extolled by Continental practitioners, was scarcely, if at all, employed in these countries.

Before proceeding to detail the several cases in which I have derived the most marked benefits from the use of strychnia, I shall enumerate those in which its employment has been either injurious or productive of no good effects, and in doing so I shall, perhaps, surprise my readers when I tell them, that in every case of paralysis arising from lesions of the encephalon, by the giving way of a bloodvessel, &c., &c., I have found strychnia injurious, or, at best, of no service. I do not deny its efficacy in other hands, but with me its results have ever been unsatisfactory; and I feel inclined to believe that the cause of this medicine being so little employed is owing to its want of success in the treatment of the majority of cases of paralysis, its use in these countries having been mainly directed to the treatment of such cases. It has also failed with me in the treatment of some nervous disorders, in which we would, perhaps, have expected better results: in chorea, for instance, and in paralysis agitans, whilst in epilepsy I have found it absolutely injurious, and I have had ample opportunities of testing its value in these diseases. In a few other cases it has also proved injurious in my hands, but the above will serve to show the principal forms of disease in which its use would seem to be contra-indicated, and I shall proceed with the

more pleasing task of recording those cases in which I have found it most beneficial.

The diseases in which I have found nux vomica and its preparations of most use are those where, from some cause or other, the *nervous powers* are not as vigorous as they should be, —where there is a lassitude and a want of tone in the system,— in short, in cases of *functional derangement;* whilst in *lesion* or disease of the nervous centres, its employment has always proved injurious in my hands. In every form of dyspepsia not arising from organic lesion, its use will be found advantageous, but most especially in the dyspepsia of literary men, lawyers, and scholars, especially when accompanied by constipation. Also in that relaxation of the muscular fibre, total lassitude, and want of tone, for which the physician is so often consulted by ladies who go out much into society; a state almost invariably accompanied by leucorrhea, indigestion, loss of appetite, and a certain amount of erethismus,—here nux vomica and its preparations will be found of the greatest value. But it is in chlorosis that its efficacy will be really manifested,—for though chlorosis is ranked as a blood disease, it is, more strictly speaking, a disease of impaired innervation; and the deficiency of red discs in the blood, which causes the peculiar greenish-yellow colour of the patient, and from which very appearance the name of the disease is taken, is the effect of imperfect assimilation, the primary cause being either an impaired or perverted action of the nervous functions, a fact which will be apparent to the most superficial observer: for how often will be found, out of a large and healthy family, one of the daughters, *and one only,* acquiring by degrees the pallid look of incipient chlorosis, while all the rest retain their wonted healthy aspect; and yet the sickly one has all the while been exposed exactly to the same physical conditions, breathed the same air, dwelt in the same rooms, eaten the same food,—why then should this one be deficient in blood-discs? If now the careful physician searches into the cause, he will, in all probability, find out by degrees that, some time previous to the setting in of the disease, the patient had suffered from some strong mental emotion, —a sudden fright, or sudden unexpected sorrow,—and from that had dated the commencement of her illness.

By far the greater number of chlorotic cases which I have met with in the upper classes had their origin in some such mental impression, and this fact would of itself, I think, be sufficient to characterize this disease as one of deranged nervous function, even if we had not the corroborative testimony derived from medical treatment. Now if a case such as I have sup-

posed is treated solely with chalybeates, but little progress will, in all probability, be made towards recovery: in vain you will administer the metal so much needed by the system,—the lacteals will fail to *discern* and appropriate it. It will pass away by the bowels, and there do mischief by increasing the constipation already, most probably, existing. To remedy this the usual purgatives of aloes and other such drastics will be recurred to, probably in heroic doses, and then, by increasing the debility, the patient will be placed in a worse condition than before. Let, however, the iron be combined with quina, a medicine which I need not say acts especially on the nervous system, and the improvement will be manifest; but if for quina you substitute strychnia, then the effect will be truly surprising. Until lately I was in the habit of adding the strychnia in solution to a bitter vegetable infusion containing some preparation of iron, generally the citrate, but my friend Dr. Aldridge having brought under my notice a double citrate of iron and strychnia, analogous to the well-known preparation of iron and quina, I have adopted its use with marked advantage and success. This salt contains, I am told, one grain of strychnia in every hundred. The dose I have been in the habit of commencing with has been two grains twice a day, immediately *before or after* a meal, selecting in preference breakfast and lunch, and increasing its gradation to ten and fifteen grains twice a day. My prescription has generally been the following:—Citrate of iron and strychnia, forty-eight grains; chloric ether and aromatic spirit of ammonia, of each a drachm and a half; infusion of chiretta, sufficient to make a twelve-ounce mixture: of this, a tablespoonful at dinner and lunch. By the use of this combination the troublesome constipation, frequently alternating with diarrhœa, so often accompanying chlorosis, will be entirely obviated; the bowels will resume their healthy action, in consequence of their peristaltic motion being improved, and the lacteals and absorbents being roused to increased action, will seize upon the metal and rapidly assimilate it. The combination of strychnia with iron will also tend to check that excitability which manifests itself under so many and varied forms in this disease, and will correct that lassitude which is one of the characteristics of this malady. In illustration of what I have been asserting, I shall subjoin the account of a case which I had ample opportunity of watching and absolute control over, trusting that the details may not prove uninteresting.

The patient, a young lady, aged 17, had been for some months declining in health; she had a slight husky cough;

total loss of appetite; great palpitation of the heart on the smallest exertion; and was pallid in the extreme; but she had not the peculiar *greenish yellow* of chlorosis; it was rather the washy look seen in cases of excessive hemorrhage,—with all this she was not at all emaciated, but, on the contrary, quite plump. Her family were in great tribulation about her, as some of her relatives had died of consumption, and the young lady herself was convinced that she had disease of the heart, from the pain she suffered almost incessantly in it, and the fearful palpitation which arose on the smallest exertion. Several physicians, both in Dublin and elsewhere, had examined her, and some feared there was incipient valvular disease. Sir H. Marsh had, however, given a decided opinion that the derangement was solely functional; and, after the most careful and repeated examinations, I came to the same conclusion, although the following peculiar symptom led me, for some time, to fear a threatening of disease of the mitral value. When the heart's action was at all excited, its sounds got so tumultuous and mixed up, that it was impossible to discriminate one from the other; but when it was comparatively tranquil, by placing the stethoscope over the apex of the heart, one could hear, amid the irregular pulsations and clicks of that organ, a prolonged musical note, apparently synchronal with the first sound. There were also marked venous murmurs in the jugulars, especially in the right one. But as the case progressed to a cure all these abnormal sounds first diminished, and then ceased altogether, thus proving them to have been only due to functional derangement. Before coming under my care this lady had been taking chalybeates abundantly, and in every variety of combination with tonics. She had taken, among others, a quantity of valerianate of iron, but without any apparent amendment. I at once put her on strychnia and iron, which, in this case, I employed as follows:—One grain of strychnia was dissolved in two minims of sulphuric acid, added to thirty ounces of water, in which one drachm of ammonio-citrate of iron had been dissolved: the whole was then placed in a gazogene, and charged with carbonic acid. The dose was one wineglassful daily immediately before lunch. The amendment commenced before the end of the first fortnight; the bowels, that had been always obstinately constipated, acted now of their own accord; the want of appetite, which had actually amounted to a disgust for food, disappeared; the colour returned to the face; the heart ceased to beat irregularly, and, at the end of three months, there was not a trace of the former delicate sickly appearance.

I have in my note-book the details of many other cases in

which strychnia combined with iron proved of the greatest service; but one case is sufficient for the purpose of illustration, and I shall now proceed with the account of a very interesting case of hysteria in the male.

(*To be continued.*)

Art. VI.—*Case of Large Chronic Abscess successfully treated by the insertion of "Drainage Tubes."* By Samuel G. Wilmot, M. D., Surgeon to, and Lecturer on Surgery in, the School of Medicine, Steevens' Hospital.

Michael Mulvanny, aged twenty-eight years, was admitted into Steevens' Hospital, under my care, with an enormous psoas abscess. The tumour occupied the iliac fossa on the right side, and extended upwards towards the hypochondriac region; it passed downwards beneath Poupart's ligament, and, bulging out suddenly about three inches below it, formed a large, abrupt swelling, engaging the anterior and inner part of the superior half of the thigh. The circumference of the thigh, at the middle of the swelling, measured seven inches more than that of the corresponding part of the opposite limb. The tumour yielded distinct fluctuation, and an impulse was communicated at every point of it when the patient coughed. There exists a curvature of the spine, formed by the three or four last dorsal vertebræ; but there is full evidence of osseous consolidation having taken place, since there has not been any pain experienced in this situation for a long time, and the patient permits forcible percussion being exercised on the spinous processes.

He is a rather delicate-looking man, but there is no *appreciable* impairment in his health; his appetite is good, he sleeps well, and his lungs are sound. Having found the several plans hitherto adopted for the cure of large, complicated, chronic abscesses almost invariably followed either by inflammation of the cyst or hectic fever, I determined on trying the "drainage" method, and I felt strongly encouraged to do so after perusing the very able account given of this particular plan of treatment by Mr. Thomas Ledwich, in the last Number of this Journal. Mr. Ledwich was so kind as not only to lend me the necessary instruments, which he had recently brought from Paris, but to afford me his assistance on the occasion of my using them. The prominent portion of the abscess, on the anterior part of the thigh, was selected as the place through which the tubes should be carried. A small incision being made through the skin and areolar tissue to the cyst,

the large trocar and canula (a drawing of which has been given by Mr. Ledwich in the Number of the Journal already alluded to), was plunged into the cavity and was brought out about four inches from the point of entrance, and in a longitudinal direction. The perforator being withdrawn, a piece of porous India-rubber tubing (a representation of which is also to be seen in the Plate given by Mr. Ledwich) was passed along the canula, which latter being then removed, while one end of the India-rubber tube was held, the latter was lodged fairly in the cavity of the abscess. These steps were repeated so as to perforate the abscess in a transverse direction. The cavity of the abscess was thus traversed by two pieces of tubing, which crossed each other at right angles. The corresponding ends of each tube were tied with a bit of silk thread.

November 18th. Twenty-four hours have elapsed since the introduction of the tubes. Hardly any pus has escaped, owing, it would appear, to the openings becoming blocked up with curdy lymph. The patient complains of no inconvenience whatsoever.

19th. To-day the abscess is more tense than before the operation, and a blush of redness, in the form of streaks, is obserservable between the openings; there is not, however, any tenderness on pressure, nor evidence of generation of air in the cavity; neither has rigor, nor any constitutional disturbance that would indicate inflammation of the cyst, occurred. *Very little* pus has as yet escaped.

20th. The red streaks have disappeared, and the redness has concentrated itself about the openings, Some pus has been discharged, and the abscess has consequently become considerably relaxed.

21st. The margins of the apertures have commenced to ulcerate; the pus is, therefore, escaping with comparative freedom. The patient's pulse is somewhat accelerated, but there is no *marked* fever of any description; his appetite is good, and he sleeps pretty well.

23rd. For the last two days the contents of the abscess have pumped out through the apertures with great rapidity, and the superior portion of the cyst seems to be completely emptied; large masses of lymph have been evacuated with it. Within this period a remarkable change has occurred in the character of the pus: it has become of a deep brown colour, and very fetid. Some irritative fever is now present; pulse 100; tongue dry, with a slight brown streak in the centre. He is beginning to sweat a little at night.

25th. The febrile symptoms alluded to at last report have

considerably abated, and the abscess is nearly completely evacuated; the small quantity of pus which now escapes presents the ordinary character.

From this date the cyst began gradually to contract, and the amount of discharge in the course of the following week did not exceed an ounce per diem. The patient's health and spirits also rapidly improved. In about a month from the date of the introduction of the tubes a small mass of fungoid granulations sprouted through the openings, and the discharge from them, which was very small in amount, was thin and watery. The tubes were removed in exactly six weeks from their introduction. For three or four days previously they seemed to occasion some local irritation, which was owing, in all probability, to the patient's having left his bed and walked about. At the period I now write, nine days have elapsed since the withdrawal of the tubes; two of the openings have closed; the superior one communicates with a sinus which leads downwards and inwards, and pressure along its course forces out some thin pus through the aperture. The iliac fossa is quite free from any enlargement, and there is no sign of a re-collection of pus in any situation.

The happy issue of this case affords very satisfactory evidence of the efficacy of the "drainage" method of treatment in chronic abscess, and calls for further trials of it under similar circumstances. Seeing that this was a *psoas abscess* of *large size*, and one that had been connected with caries of the vertebræ, if the "drainage" method had failed, or been followed by untoward results, we should not have had much ground for feeling discouraged; its success, therefore, under circumstances that would appear so unfavourable, is the more gratifying, and gives to this plan of treatment additional value. The profession is, I think, indebted in no small degree to M. Chassaignac, of Paris, for having introduced this new method of cure for chronic abscess.

Art. VII.—*On the State of Medical Practice in Turkey.* By R. F. Foote, M.D., Constantinople; lately Medical Officer to the Turkish Hospital at Varna; and formerly Resident Physician to the Norfolk Lunatic Asylum, &c.

The experience afforded in the East to the members of the medical profession will, I trust, throw light upon many disputed points in our art; it was from this quarter of the globe that the dawn of medical science was first perceived, and it was from the ancestors of the chief inhabitants on and near the Black Sea that we received our early scientific treatises on medicine.

On the battle-field, and in the besieged town, men were led to consider what assistance the administration of various herbs might afford, what advantage the attention to dietetics and hygienics would give; or what results manual interference could show to those suffering from sickness or wounds.

I wish, in the following remarks, to direct attention to the present state of medicine in Turkey, and in a certain degree to contrast it with the English practice, as far as can possibly be done from the experience afforded.

The surgeons employed with her Majesty's troops in the East went forth with different prospects to those to whom I had the honour to belong. They were acquainted with the habits, manners, and constitutions of their patients; knew the effects of a tropical sun on these men, and of the remedies they could best use with advantage.

The nature of the climate of the Black Sea was more or less disputed; but that Varna proved to be singularly unhealthy, must be admitted, as, of the thousands encamped there in the summer of 1854, hundreds of soldiers died of cholera, fever, and dysentery. The patients to whom we were called to administer were of a different nation, but soldiers; it is therefore necessary to inquire as to the habits of the Turkish soldiers, bearing upon the diseases existing among them; the diet in health; the prejudices which their religion entails;—before we consider the effect of various remedies and food upon them.

My knowledge of them in this paper is not confined to a period of six months simply, during which time a vast number came under my observation, suffering from various diseases, but the facts relating to this period being accurately kept, I shall often refer to Varna.

In dwelling upon the result of our experience at Varna, I trust I may not only contribute some facts, confirmatory of what has been previously noticed, but also stimulate other

persons to record the results of their experience; and that many important facts which now lie buried in the case-books of English regimental staff hospitals, shall be drawn from their hiding-place, and enlighten, not only the present military surgeons, but those who aspire to this honourable and responsible position.

There is one thing which is more satisfactory to me than all—that our efforts were attended with success, as exhibited by the patients themselves; and had the soldiers of Omer Pasha's army an opportunity, they would, when placed under their native doctors, act as the English sailors of old in 1797, petition "for better attendance when sick and when wounded in action."

Age.—Of the 1400 patients admitted under our care at the Varna Hospital, more than 75 per cent. were over the age of 30 years, and a very small per-centage below the age of 20 years. They were what is termed Rediffs: a great number were 40, 50, and some even 60 years old. I have repeatedly made inquiries how this happened, and have invariably been told that the Government, having less care for the Rediffs than the young soldiers, the former were not so well fed or clothed, and were subjected to longer and more laborious work, such as the digging of trenches, and making batteries to defend Eupatoria. These Rediffs are men who, having previously completed their term of duties as soldiers, were in the late war called out to act a second time.

Habits.—The habits of the Turkish soldier are essentially simple,—when circumstances will permit, he is supplied daily with bread, meat—chiefly mutton—haricot beans, and rice.

No coffee, sugar, or vegetables, are supplied as a regular diet.

He rises early in the morning, and at sunrise many may be seen in prayer: at sunset the same religious duties are performed.

From the constitution of the Ottoman army all the officers are able to peculate upon the unfortunate soldier, from the Bashy or general, the More Alli or colonel, Ben Bashy or major, Uze Bashy or captain, even down to the On Bashy or corporal; consequently, the real rations given do not entirely agree with the regulations. Out of 6000 soldiers and officers sent from Eupatoria, not 1 per cent. among the sick or wounded were above the rank of Chaoush, or sergeant.

The Turkish soldier is religiously bound to his superior. When beaten for a slight offence by his superior, he exhibits the greatest composure, and appears to think that, as it is the

will of "Alla," it is his duty to submit without a murmur; but should a Christian, or, as he terms him, a Giaour, attempt any attack on him, he as quickly shows his resentment. In his religion he is wildly fanatic, and at all times ready to sacrifice himself against the Infidel, by which name the Russians are now pre-eminently styled, and were it not for the cowardice and ignorance of Turkish officers, the Ottoman army would be a model.

Whenever an opportunity offers itself, the soldier, seated on the ground cross-legged, takes what he calls his "kef," that is, he smokes his enarguilé, chibouk, or cigarette, apparently contented with his lot, and entertaining a firm but humble faith in the great Almighty.

When he can, he regularly takes a bath once a month, but in camp he becomes extremely dirty, although he is particular in washing his linen, face, hands, and feet.

Clothing.—The clothing is simple, but useful; it is composed of a blue cloth tunic, after the form of the French, and although not of fine texture, is very strong and durable. The head is covered by a fez, which I do not think is a happy gear, on account of the absence of protection to the head from the sun in summer. I had heard it frequently complained of by Turks themselves, and believe, from what I have seen, that from the absence of any peak, or protection to the eyes, it may account for the frequency of ophthalmic diseases.

The shoes are not of the stoutest material, but those soldiers who are intended for a winter campaign are supplied with a cloth buskin which reaches from the foot to the knee; over them he wears a pair of low shoes, and trowsers of the same material as the coat. They are each supplied with warm great-coats, but seldom or never wear flannel next the skin.

At night he lies down in his great coat, with his head on his knapsack, in the tent or barracks, as the case may be, beneath him being a small piece of carpet, which forms a part of his kit.

In summer he is provided with white cotton trowsers, and with this exception no other change can be noticed when on parade.

In camp at Eupatoria the food consisted of salt, dried mutton, hard biscuits, brown, made from such ingredients that it was impossible to chew them until they had been soaked for some time in water.

The mutton, rice, and beans, are made into soup, which they take for dinner in the evening. In consequence of this diet, which was oftentimes deficient both in quantity and qua-

ity, many of the men died from the worst forms of scurvy; whilst, during a period of six months, no less than 6000 were conveyed to Varna.

On the other hand, of 20,000 soldiers encamped before Varna for two months and a half, in August, September, and October, not five per cent. were, on an average, in hospital, they being regularly supplied with fresh meat, and obtaining for themselves fruit and vegetables from the neighbouring country. A remarkable fact occurred in connexion with this, that of the soldiers of the Turkish Polish Legion, who had only recently arrived in this country, and whose diet was the same as that of the Turks, disease prevailed, and diarrhœa, dysentery, cholera, intermittent and remittent fevers, disabled 25 per cent., and carried off a large number, owing, no doubt, to the bad effects of the peculiar atmosphere, combined with the influence of a large quantity of vegetable food, and bad spirituous liquors.

It, no doubt, appears strange to persons who have heard of Varna as a very unhealthy spot, to choose it for a locality for hospital accommodation, but I was assured by her Majesty's Consul, Colonel Neal, that Varna was, as a rule, a healthy place. It is situated on the northern shore of the bay of Varna, on a gradual ascent from the sea, the extremities of the town being about 60 feet above its level. From this the hill rises gradually for about a mile, and then abruptly forms a mountain range some hundreds of feet high, and from the summit of which, on a fine day, a most extended view is obtained. The Balkans in the distance, Cape Galata standing out from the southern side of the bay, and the town on the ascent of the hill, covered with vineyards and cherry orchards, it has a very picturesque appearance.

On the top of the hill, near the village of Franza, a tent hospital was established for convalescents. The camp was supplied with pure water, and the situation proved to be a very healthy one.

To the west of Varna is a marsh about a mile in breadth, and half a mile in length. This is succeeded by Lake Devna, which extends for five or six miles in the direction of the Shumla-road, about half a mile in breadth, where it terminates, being connected with another lake of much smaller size by a rivulet, the ground on either side of which is very marshy. From this, soon after sunset, considerable fog arises, and stretches itself over the town.

Viewed from the bay, the town appears placed on a

gentle slope, with barracks and hospitals in the rear, a gradual ascent for about two miles to a long ridge of hills, which stretches as far as Cape Loughantik.

The weather during the time of our residence was pretty uniform. During May it was warm, and not oppressive; in June the thermometer rose higher, but the heat of the day was relieved to a certain extent by the sea-breeze; and the hot days were succeeded on the 24th of June by a thunder-storm.

From this time to 13th July the weather was about the same as previous to 24th; but on that day it was very sultry; and in the evening there was a severe thunder-storm, with rain. Heat gradually increased to the 26th of July; it was extremely hot, the most oppressive day I had witnessed, but the sea-breeze in the middle of the day much relieved this.

The 1st of August was not quite so hot as on the previous days. On the 14th a severe hail-storm occurred; hail-stones nearly as large as walnuts fell in great quantities, and a hundred feet of the town wall, with seven or eight houses were washed into the sea.

On the 15th the weather was fine, but not quite so hot. On the 16th it increased. The heat continued the same until the 14th of September, when the weather suddenly broke; rain fell in torrents, and showed signs of continuing for some time; but on the 15th the morning was bright, and signs of rain had passed away. On the 16th it was cloudy, and not so hot. 18th, the thermometer was 15° lower than it was for three months previously, and the Turks asserted there would be no more warm weather,—that generally about the 12th of September cold weather begins. The 19th, the nights having become much colder, it was deemed prudent to break up the tent hospital. On the 21st it became warmer, but for some days the weather was very changeable.

The month of October was ushered in by fine warm weather, and remained so, with the exception of three days in the third week, up to the time of our leaving, on the 3rd of November; and I noticed that on the morning of our leaving Varna the weather was as warm as when we were at Gibraltar on the 28th of March, the thermometer being 80° Fahr. in the middle of the day in the shade. During the night the thermometer falls several degrees: so that the difference between the heat of the mid-day and the night is very considerable.

Until August the supply of vegetables was deficient, and such as were to be obtained fetched a high price. There was an absence of articles which the most simple tilling of the land would afford—potatoes, cabbages, French beans, lettuces,

&c., which much interfered with the proper treatment of our patients: for it was not until August that we could be supplied with cabbages or any such substitute for patients suffering from scurvy.

The Military Hospitals, at Varna, during the war, have been for some time considered as the best conducted in the province of Turkey; and that under the control of the Turkish authorities had 400 beds, with four physicians, four surgeons, and four pharmaciens or dispensers. It was a stone building placed at one extremity of the town, to the left of the Shumla-road, but in rather close proximity with the marsh, of square form, and contained wards generally capable of holding 50 to 100 patients. Iron bedsteads were used, with woollen or cotton or straw mattresses.

In each ward were one or more water-closets; but there was an absence of night-stools, or proper bed-pans. Each man's name was placed over the head of his bed, written in Turkish and French characters, with the regiment, battalion, and company to which he belonged. In French were written the disease, the diet, and treatment from day to day.

In my visits to this institution, I have been much struck with the great number of patients on quarter and half diet, although the cases appeared to be nearly all of an asthenic character.

When the Polish officers and soldiers who formed the regiment of Turkish Cossacks were patients here, they loudly complained of their treatment as to food.

The use of the lancet for bleeding appeared to me pretty general, although, from a cursory glance, one could not tell the exact number of diseases in which it was used; but cholera, scurvy, and continued fever, were among the number.

The absence of wine, spirits, and all stimulating beverage, in any case whatever, must be considered a peculiarity. In the treatment of anemic diseases, at one time, I had three patients whom I myself supplied with cognac.

There were very few cases of surgery for one to form a correct opinion as to the treatment adopted; but from answers to various inquiries I have made, I believe the majority of the medical officers connected with the Ottoman army to be entirely ignorant of it.

Bleeding being an easy operation, they lose no opportunity for exhibiting their knowledge by performing it.

In conversation with one of the physicians of the Turkish hospital, a Hungarian, he lamented exceedingly that there was not a physician of experience at the head of the hospital, as he

remarked the medical treatment was considered by the manager, who was formerly a farrier, as a secondary affair: so long as he could have the hospital according to his military ideas, in a good state of order, he was satisfied; but every one, from the chief doctor or Hakim Bashy, down to the lowest dispenser, was under his control. He practically paid every one, hired every one, and discharged whom he thought fit. Medical science was kept in judicious abeyance; a cheaply conducted institution was believed to exist, peculation was carried on to a great extent, and of course the patients loudly complained.

I was informed that at Constantinople the Government find their hospitals very expensive items, and believe them well conducted: such, however, cannot be the case, for so long as they are placed in the hands of ignorant and uneducated men, who have risen to their position as managers purely by favouritism, and often by unfair means, so long they will remain simple receptacles for soldiers diseased and wounded on the battle-field, instead of, what they should be, hospitals for the cure of soldiers who have served their country, and where every human effort should be exerted to relieve them.

Although the manager was not permitted to interfere with our hospital, yet the independence of this man acting as purveyor, in opposition to the direction of the medical officers, was somewhat felt, but not to the same extent as at Scutari, owing to the energy of Dr. Farquhar, who kept him in check by threatening to refer any case of neglect of the supply of provisions, &c., to Omer Pacha; and I was by this means struck with the absolute necessity of a medical man being placed as chief of a military medical establishment, with good rank and proper remuneration. No one can wonder at the neglect, the amount of bad management, and the vast number of deaths which occurred at Scutari, and the other regimental hospitals, when power was divided between two or three different heads, each disputing as to prior rank and authority, and also the effect of the small pay on the regimental and staff officers.

If the medical men in the army were placed in a better position, with higher pay, quarrels and disputes would seldom, or certainly less often, occur, and the surgeons would feel themselves more independent.

But with nurses flitting about the wards, giving a postage stamp to one soldier, a newspaper to another, and a glass of wine to a third, against the directions of the medical authorities; with purveyors acting as steward-superintendents, taking the management from the hands of the medical officers, nothing

but confusion, prolonged disease, and ultimately a high mortality, must result.

All officers having any connexion with a military hospital should be under the control of the medical officer in charge,—in my opinion, he alone should be able to remove any subordinate officer, he alone should appoint to their respective duties, and he alone should reprove when necessity offered itself. Give him high responsibility, and you may expect from him an equivalent efficiency.

I have frequently witnessed the sad effect on patients by the interference of unprofessional people: persons who thought they were keeping a fellow-being from death, were at the the very time hurrying him more rapidly into eternity.

The army surgical appointments are filled generally by uneducated men, who, having been originally a year or two in druggists' shops, get an appointment in the army as Djerrah or surgeon; an opportunity for practice offers itself; the druggist's boy now wears uniform the same as another officer; he is a Greek, an Armenian, an Italian, or Levantine of some nation; he is by all termed Hakim Bashy, as both the Greeks and Armenians, being fond of flattery, do not spare it to each other.

The physicians or hakims, there being one or two in each regiment, are educated in the Medical School at Haskoni, but are chiefly Turks, Armenians, or Greeks. The instruction is carried on in French; but few have either the energy or ability to acquire the French language sufficiently to enable them to study with advantage the various medical authors. They acquire a smattering of medical terms, and sufficient to converse with their patients, speaking their language being the great *sine qua non*.

Another kind of medical men is found here, who practise with great eclat, the secret of their success among the natives being that they remain here up to the age of 18; they are thus enabled to speak the various languages of this country, and being brought up in the moral atmosphere of Pera or Galata, are well versed in the different species of chicanery and deceit, which is practised in this country more than in any, I believe, on the habitable globe. No description can portray it, no imaginative genius could realize it, and no one non-resident would believe it. They are Greeks, Armenians, or Italians; they go at the age of 18 or 19 to Pisa, where, after remaining about two years, they get a superficial knowledge of medical science, and leave with a high-sounding title of doctor of medicine. They either visit Paris, Vienna, or London, their object being that of acquiring the language, and return to Constantinople more

conceited than when they left. They then frequent a certain pharmacy in Stamboul, Galata, or Pera; are prepared to order leeches in pain from neuralgia, or bleed generally and give large doses of antimony in the last stage of consumption; to rave against mercury in any form of syphilis. Indeed, leeches, antimony, and bleeding, may be said to be the three great remedies always at hand, and are as religiously believed in and prescribed as they avoid the three cardinal virtues of truth, honour, and virtue.

Among the most enlightened medical men found in the Ottoman army, I think we may safely place them in the following gradation—French, Germans, Italians, Levantines, Greeks, Armenians, and Turks.

We cannot properly include the English staff; they were appointed by the English Government, and paid by the same authority. They no longer exist, and are, therefore, subjected in no way to the degradation which, I am sorry to say, is too often heaped on our other medical brethren.

As another mark of the way in which medical science is kept in abeyance, I need only refer to the mode of treating the insane at Varna. On one occasion, on visiting the barracks, I observed two men with thick iron collars on their necks; another circle of irons around each wrist and ankle; they were connected by very heavy iron chains, which were such as are placed upon the worst sort of criminals. I asked why this was done, and was told that they were "Dely" or mad. I further found that, on removing the chains, the patients were quite controllable.

The inhabitants of this country are in the habit of causing considerable determination to the skin to take place by what may be considered artificial means, as they once a month take vapour baths, and at the same time they neglect the proper ablution of their skin daily. I feel certain that the habit to which some Europeans submit themselves, to take a bath of cold water daily, tends very much to ward off disease and keep them in good health by relieving the liver and other secreting organs.

When at Sinope I was struck with the fact that the women wearing no stockings in wet and cold weather during their work did not suffer from catarrh; but Europeans, well clad, were taking cold by condensation of the warm moisture from their feet; and the latter persons putting their feet each morning into cold water found that they were warm the whole day afterwards, and no longer were subjected to the annoyance of catarrh.

Among the civil practitioners holding the highest rank are those who are educated in our European universities, such as Paris, Vienna, Berlin, Edinburgh, Pisa, London, &c.—men who, having received a thorough medical education in their own country, have been induced to emigrate to Turkey, from army appointments to the various embassies or consulates, and subsequently have been induced to remain in Turkey in private practice. These men bring, generally, a certain moral tone with them; it is they who give respectability to the profession at Constantinople.

There are others of high standing—men who, in their own country, have been unwilling to witness tyranny and oppression, and who have chosen Constantinople as an asylum where they can earn their living and enjoy their opinions without being interfered with. But all physicians and surgeons, from whatever country they come, must learn to speak Turkish, Italian, and French; if to these they can add modern Greek, so much the better. Others have remained since the last war; some with diplomas, others without. No regularity as to fee seems to exist, but the individual practitioner makes his demand according to his eminence or his amount of education, and the cheaper advice is obtained as a general rule, the worse it may be said to be, as the public are only able to judge by what they pay.

There are also Italians, Ionians, Maltese, Armenians, Levantines, and Greeks,—some who are neither Europeans nor natives, but whose fathers having been Europeans, have married Greek women, a race is produced well fitted in all the arts of diplomacy, who, representing themselves to be English, &c., are really Greek in ideas and cunning.

There is no Pharmacopœia; few of the pharmaciens understand Latin, and each medical man writes according to his fashion.

I have often found very grave mistakes made at some of the best-conducted pharmaciens in Pera, and know for a fact, that it is impossible to depend upon having a prescription made correctly unless it is under one's own observation. In the measuring of fluids no graduated glasses have hitherto been used; and the mode of preparing the medicines containing ammonia, ether, or hydrocyanic acid, is extremely careless. The bottles are very fragile, and paper instead of corks is used to retain the evaporating substance.

Hitherto the microscope and chemical analysis have exerted very little influence; and on my arrival here I found the greatest difficulty in procuring test-tubes. There being no demand for

the various apparatus connected with the microscope, none are to be obtained, the supply being no doubt regulated by the demand.

Quackery of various kinds exists, and is practised in some instances by the priesthood—Greek, Armenian, or Turkish. I think that perhaps the hydropathic is the least popular.

The Turks must be said physically to belong to the variety of Indo-Europeans as essentially as the Caucasians themselves, the type from which this great division emanates, although their religion and language are essentially Asiatic; but we do not observe any marks which are commonly found among the Tartars, characterized by the broad, flat face and prominent cheek-bones, by the flattening of the cheek and the nose, which is neither arched nor aquiline; we find in two Turkish regiments men whose appearance is as different as an Englishman from a Hindoo.

And in a country adjoining Circassia, Abassia, I saw in November, 1856, at Sakim-Kalee, natives speaking a language which an intelligent Turk told me could only be represented by shaking a bag of stones; men with fair complexions, yellow hair, and blue eyes; whilst others presented the "xanthous or olive hue;" and whose physical characters were as truly European as the most polished gentlemen in England, with whom was an aristocracy of gait, of general appearance, and of deportment, which one would not expect to find in such a locality: men with stature six feet, well proportioned, and as upright as an English officer; with small hands and feet, strong, powerful limbs, and well-developed skulls; good facial angle, aquiline nose, and an oval well-formed face.

Further, there can be no doubt that the vast number of women annually brought to the Constantinople market to be educated and reared as Turks, produces a considerable influence on the Turkish nation; for when they arrive at the age of 10, 12, or 14 years, they are put to school, where they are taught the Turkish language, and, according to their beauty are subsequently transported to some Turkish hareem.

The Circassians, seen in their native element, look like bold mountaineers ready for anything of a character daring or exciting, either in field-sports or battle; armed to the teeth, they rush from the thickly wooded mountain side, gun in hand, dressed in a long tunic which stretches to the knees, each having in his belt daggers and pistols in numbers; on each breast is a row of small pockets, ten to twelve, each containing a cartridge; even the children, as soon as they can walk, are

dressed after the manner of their fathers, and learn to handle a gun as early as possible.

When we were ordered to Varna, our staff consisted of a Deputy Inspector of Hospitals, Dr. Farquhar, with four surgeons, four dressers, and two dispensers. Omer Pasha had issued a firman to give up to us the best houses in the town, to supply us with proper hospitals and appliances, and to give our rations regularly.

The Turkish hospital then having a full staff of officers, a building capable of holding nearly 200 patients was offered to us, which had been previously used for hospital accommodation, being the palace of a Pasha; it was situated on the Shumla-road, at the further extremity of the town. The situation was good in point of locality, the rooms tolerably lofty, but the house cut up into a number of small rooms. From the southern side is a good view of the bay and the town.

The bedsteads were wooden, what is termed trough bedsteads. I have not seen any like them, except in England, in asylums, where they are used for dirty and feeble patients, from having raised sides to prevent the patients falling out of bed. The mattress was of straw, on which was placed a woollen bed; the latter, however, was not supplied for some time after the hospital was opened. The sheets, of calico, were in goodly number. The covering consisted of a kind of thick quilt, composed of wool, and covered with calico. Each sick man was supplied with a shirt, a pair of drawers, stockings, slippers, a long, loose, thin dressing-gown, and a great coat.

Water-closets existed on each floor, but the supply of water being deficient, they caused much trouble. No night-stools were supplied, but metal bed-pans were procured after a considerable number of applications on the part of Mr. Farquhar.

The attendants were men selected from the regiment stationed in the town, without much regard to their knowledge of nursing, but, although often exhibiting much stupidity, were patient to learn their duties.

The visits to the hospital were made at 8 in the morning and 4 in the afternoon.

The hospital was at first divided into equal parts, to each of which were attached a surgeon and a dresser; subsequently the number was reduced to three, and, by the sickness of one member of the staff, to two in July, and continued so until near the termination.

In addition to ordinary furniture, we were supplied with Hooper's water-cushions, which were very useful.

The hospital accommodation not being sufficient, we were offered 100 beds in the Turkish hospital; but this we declined, thinking it better to carry out our system of management separately in all particulars.

In addition to this, an offer was made of the barracks for hospital accommodation; but there was no money to do anything with respect to cleaning, ventilation, or draining them, and hundreds of English soldiers were reported to have died there in the previous summer.

The sick removed from Eupatoria to Varna were always placed in the barracks, whatever their condition might be; consequently, many died before admission to the hospital.

The barracks is a long building situated within the walls of the town, about sixty feet above the level of the sea; it is about 500 feet long, and 250 feet broad, rhomboid in form, built of stone, two stories in height, divided equally in the centre into two parts, so that there is on either half a square of about 200 feet long. The whole building is said to be capable of holding 5000 soldiers—that is, Turkish. The rooms are about 100 feet long, and 20 broad; two partitions run down the centre, with a pathway of about two feet wide. The height of the rooms is about eight feet, without ventilation, drainage, or a proper supply of water; the floor full of holes, and the building filled with rats; the windows, many of them, broken; and the external aspect of the building had the appearance of some huge convict establishment or antiquated lunatic asylum: the floors appeared never to be cleansed, and the effluvia was great.

Whenever patients were sent to Varna, they were always conveyed to this establishment, at all events to stay one night, until they could be examined by the manager of the Turkish hospitals, who generally of his own accord selected patients to be sent to the hospitals. It has been sometimes my duty to select patients from this place, and the effluvia has been something beyond imagination, as so vast a number is often placed in one room. Some had been brought thither in arabas, drawn by buffaloes, many *in articulo mortis*, and placed in the room without bed-clothing, and indeed nothing to cover them but their great coats and the clothes they ordinarily wore, the rug being under them.

The mode of getting them into the arabas, and from them, was a most disgusting sight. No stretchers for the feeble; the men had no idea of carrying them, but they dragged them literally from one place to another. Four or five were placed in one araba, whatever their condition might be.

According to some military regulation, it was necessary

that men, instead of being moved direct to the hospital from the vessel, should go first to the barracks, about half a mile from the bay. To break through this regulation Mr. Farquhar had much difficulty; and though in some instances it was accomplished, yet, whenever the chief of the hospital could avoid it, he did.

The buffalo carts were of simple construction, about eight to ten feet long, and two feet wide; made of planks put together in a very rude manner; they were without springs, and to each were four wheels, all differing in form, and perhaps size.

The means of transporting sick from the Crimea to Varna was very bad. I have frequently heard it stated by captains of transports that the sick were put on board ship at Eupatoria in a disgusting state indeed,—that they were less cared for than so many oxen or sheep. The first case that came under my observation was that in which 400 patients suffering from all kinds of disease were sent in a Turkish frigate from Eupatoria to Varna, and there was no one to attend upon them but the Turkish doctor of the ship, who did not look upon it as his business to interfere with these soldiers. They were provided with water and bread for three days, but owing to the wind, &c., they did not arrive at Varna for ten days after leaving Eupatoria; thirty patients died on the way, and the amount of mortality among them after being removed to the hospital was fearful. No medicine was given them on the voyage; there were no nurses, and although many suffered from scurvy, yet they were supplied with very thick, hard, brown biscuits, which a man in health could *hardly* eat.

Another potent cause of disease which existed at Eupatoria was, no doubt, the water, which among our staff, during their early residence, predisposed to a great extent to diarrhœa, from the salts which it contained, and which, though not injuring the old residents, produced much disease on all persons on their first arrival in the town.

Again, I have witnessed that a decided change of provisions is alone sufficient to cause much irritability of the mucous membranes of the chylopoietic viscera. I have known instances in which persons recently arriving in a port have suffered from the most urgent symptoms of diarrhœa, with or without vomiting, from eating the meat or fish to which the natives are accustomed.

(*To be continued.*)

Art. VIII.—*Transfusion of Blood in the Horse in Diseases attended with low vital Action.* By James Farrall, Veterinary Surgeon to the Lord Lieutenant and the Constabulary Force of Ireland.

During the autumn of 1856 and spring of 1857, an epidemic prevailed in and about Dublin, indeed, I believe, all over Ireland, to a greater or less extent, which at its outset presented the leading features of influenza, but of a low typhoid character; it was much more prevalent along the eastern coast than on the western or in the midland counties. In Dublin it was very fatal, and in most of the cases which I was called on to see, I found intense debility, which in some instances had come on within a few hours after the disease had first manifested itself. Horses were seen to eat their food in the morning with every appearance of health and good spirits, and before evening they were found resting against the side of their stables for support; so rapidly had debility followed the first symptoms of the disease.

With all these cases the principal difficulty was to support the strength, watching at the same time closely the symptoms which manifested themselves as the case progressed. Sometimes the urinary organs became affected, and repeated evacuations caused the patient to sink rapidly. In others the bowels were involved, and to such an extent as to resemble bad cases of cholera in the human subject: but the worst forms of this disease that I witnessed were those in which the animals had been bled previously to my having seen them. With those cases which had not been bled, I had, in treating them, an average amount of success; but in most of those that had, I am bound to admit I was by no means so fortunate. I found that everything I could do to restore the vital powers was, in the majority of cases, useless, and, save in the instance of a few young, vigorous horses, collapse set in within a few hours after the abstraction of the blood.

I gave a fair trial to all the usual remedies. In cases where influenza had assumed a typhoid form, and in which the leading symptoms were a feeble, thready pulse, quick and laboured breathing, cold extremities, clammy mouth, drooping eyelids, utter prostration of strength, and, in short, the usual symptoms of collapse, especially such as had been reduced to this state by loss of blood or by excessive purgation, I was generally unsuccessful. Discouraged by repeated failures, I determined to try the effect of "transfusion," believing it to be a not

unnatural restorative, especially in cases where the improper abstraction of blood had superinduced the symptoms above alluded to.

To enable me, therefore, to give this operation a fair trial, I commenced a series of experiments, so as to discover the simplest, safest, and most effectual method of conveying blood from one animal into another: I first tried the transfusion syringe, which has been used by medical practitioners for this purpose; but, whether from want of skill in its use, or from defect in the instrument, which had been recommended to me as one of the best, or from some other cause, I cannot tell, but certain it is, I was in no case as successful with it as I was with a more simple apparatus. I fancied that the blood lost much of its vitality by being exposed to atmospheric air, and also by its being forced and compressed within the cylinder of the instrument. These impressions as to the cause of failure induced me to undertake several experiments, with a view to the construction of an instrument which would fulfil the requisite indications, viz., to allow the blood to pass freely from the vein of the healthy into that of the diseased subject without coming in contact with the atmospheric air, and without alteration of its temperature. I at length adopted an exceedingly simple apparatus, which I can describe in a few words. It consists of an india-rubber tube of some two and a half feet long and three-eighths of an inch in diameter, that is, about the caliber of the vein in the adult horse. This must first be turned inside out and carefully cleansed of all sulphur, arsenic, or other matter used in vulcanizing. To either end of this I fitted a silver tube, curved somewhat like a syphon, so that the end, which is slightly rounded at the point, might be passed easily into the vein, both tubes being exactly the same. A narrow zinc or tin trough is required to contain hot water, in which two-thirds of the tube should be immersed during the time that the blood is flowing. This completes the apparatus, and, being prepared, and the horses ready, held by assistants, the jugular vein of the healthy horse, from which the supply is to be taken, is to be opened, and into it one of the silver tubes to be carefully passed, point upwards, so as to receive the current of blood as it flows back from the head; the operator holding the other end, and, having previously opened the corresponding vein in the patient, he should wait till the current is passing freely down the tube from the healthy horse, and then bring it in contact with that which is now flowing slowly from the patient; he should pass the end of the tube carefully into the vein, point downwards,

by which means the possibility of any air getting into the tube is avoided. The quantity to be transfused is readily ascertained by watching the expression of the eyes, and noting the pulse carefully. So long as there is no dilatation of the pupils, and so long as the heart's action is not very much affected, the blood may be allowed to flow on uninterruptedly, but as soon as the pupils become dilated, it is necessary to lessen the supply gradually, by compressing the tube with the finger and thumb. If the dilatation disappear after a minute or two, the blood may be again allowed to flow, but if the dilatation increase, you must stop, or otherwise injurious consequences will result. In the cases of two animals which I purchased for the purpose of experiment, I purposely let the blood flow after the dilatation of the pupil had manifested itself, in order that I might see the result, and I found that the dilatation of the pupil increased; and in one of the cases, after winking both eyes three or four times in rapid succession, the horse reared up and fell back. In the other case, I forced the blood in from an india-rubber enema bottle; the pupils first became still more dilated, the breathing very quick and difficult, and the eyes assumed a wild, agonized look, and the animal, with a sudden bound forward, fell dead. I had my finger on the artery during the entire time, and observed a great unsteadiness and fluttering of the pulse, which increased in frequency until the instant before he fell. In the first of these cases I did not force the blood into the vein, but allowed it to flow until I perceived the injurious effects on the horse; he tottered and fell, but in a short time recovered, and was walked back to his stable; he died in the course of the night, and on examining his head, I found considerable congestion of the brain. The tube which I use will transfer about three quarts of blood in eight minutes; at least I judge so from the fact that when used as a syphon it will pass three and a half quarts of water, and a little less of oil from one vessel to another in that time.

In one of my successful cases, phlebitis supervened both in the healthy and diseased horse. I think I am correct in saying that this disease is by no means so likely to occur in horses as in human beings, and is certainly not so formidable: but nevertheless I am quite sure that it may happen as a consequence of the operation if the instrument be not kept scrupulously clean, and also if great care be not taken in its introduction into the vein. Having, from these and other experiments not necessary to detail, determined on the mode of operating most likely to be successful, I shall now proceed to state the

result of four cases in which I have operated, and which I think I may look upon as having been followed with entire success. In three of the cases the patients had been bled a short time previous to my having seen them, and were so much weakened that they could scarcely walk. In the fourth case a drastic purgative had been administered, causing super-purgation and great prostration of strength. In each of the four cases the condition of the patient was so similar that the description I have already given may answer for all. Having selected a healthy young horse from which to obtain the blood to be transfused, I opened the jugular vein in the patient and in the healthy subject, and having inserted the tube, as before described, into the vein of the healthy horse, I placed the india-rubber tube in the tin trough containing the hot water to maintain its temperature, and the other curved tube into the descending portion of the vein in the patient. As soon as the current from the healthy horse had completely expelled all atmospheric air, the instrument being thus arranged, the blood flowed freely from the vein of one horse into that of the other in an unbroken current. The average quantity of blood transferred in each of these cases was about three quarts. I observed no particular symptoms to follow from the transfusion until two quarts or more had passed from the healthy to the diseased subject, but as soon as about this quantity had flowed into the diseased subject, there appeared to be produced an amount of stimulation indicated by an increased action of the heart; at the same time the pupils began to dilate, and the countenance evinced an anxious expression. My former experiments led me to watch with great care the progressive dilatation of the pupil, and I deemed it expedient in each case when this symptom was well developed to compress the tube so as to diminish the current and allow the transfusion to proceed more gradually and slowly. Occasionally I almost completely interrupted the current until the subsidence of this symptom, and I found that when about three quarts had been transfused, any additional quantity was followed by unpleasant symptoms, which indicated the necessity of stopping the operation. On removing the tube and closing the vein, all symptoms of irritation gradually subsided, and the pulse, from being rapid and irritable, became slower, stronger, and fuller, gradually approaching the healthy standard.

In each of these four cases the reaction was steady and progressive. The natural warmth of the extremities was gradually restored, and in the course of ten or twelve hours the patient presented other equally unmistakable symptoms of amendment,

such as returning appetite, more quiet and steady respiration, cheerfulness of countenance, and a willingness to move about: from this point there was a gradual improvement, and in a short time they were pronounced cured.

I have been induced to submit these few remarks, much less with a view to record any little success I may have had in performing the operation myself, than with a hope that others far more capable will take up the matter and test it thoroughly; for, whatever obstacles and objections there may be to its performance in the human subject, there are none whatever to prevent its becoming a most valuable agent in veterinary science.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

A Treatise on Rheumatic Gout, or Chronic Rheumatic Arthritis of all the Joints. By Robert Adams, M.D., A.M., M.R.I.A., Surgeon to the Richmond Hospital, &c., &c. Illustrated by Woodcuts and an Atlas of Plates. London: Churchill. 1857. 8vo, pp. 362.

Axioms, whilst they frequently become trite by being constantly used as precepts for the guidance of society,—the faculty of mere articulation requiring but a slight intellectual effort for their repetition,—rarely assume that attenuated character by the pressure of constant practical illustration, which demands a more tangible sacrifice of individual labour for its accomplishment. When this latter exception does really occur, which appears to be the case in the present instance, it justifies the quotation of an oft-used sentence that should direct our conduct, viz., "Great opportunities involve large responsibilities." Some individuals know it, applying it as a test-standard in their judgment of others. Some, again, feel its influence, and thus may become equal to the opportunity when it arrives; but few there are who know its essence, recognise its force, and endeavour to make their conduct a practical illustration of a sense of their responsibilities. In our profession the justice of associating particular responsibilities with the enjoyment of special position, has been always acknowledged. But it is unfortunate that at the very period when a large and varied experience—contingent on the keen observation engendered by the peculiar manner in which the senior members of the profession are brought into contact with their cases—would render their writings valuable as practical records—the very measure of success which they have attained, and the onerous duties implied by their position, indispose them to incur the

effort involved in literary labours; and although there are some noble exceptions, still there are not many like Sir Astley Cooper and Sir Benjamin Brodie, who, in the zenith of their fame, and in other respects equally successful, have sought to confer benefits not only on the profession which assisted to place them in that position, but also equivalent, although more remote, advantages on society, by the publication of their extensive experience. Our own country has also contributed to those valuable exceptions, and furnished many labourers who have been actuated by the same unselfish desire to occupy a similar category with those great toilers of the sister country who have enlarged the literature and advanced the cause of medicine as a science. Colles, Graves, Carmichael, among the past, as well as many living authorities we might adduce were it not that any selection might seem invidious, have left records of practical observation and patient research that will remain as monuments of honour to all coming generations who may be associated with the art of medicine and surgery. It is therefore with regret, for the honour of our science—yea, and almost with shame for the very honesty of those who should justly be the exponents of its laws, the advocates of its progress, and defenders of its cause—that the admission must be made, however disagreeable it may seem, that the experience derived within those institutions which, being the property of the country, must, necessarily, fractionally belong to each individual member of society, has, as a general rule, been retained for the purpose of individual advancement—in fact, for the advantage of the few to the detriment of the many. But it is a needless task to pursue this subject further, as the prevalent failing of human nature which inspires every member of our profession with the hope that he will occupy, at some *remote period*, this position of dignified individuality, mars the prospect of the coming generation, solely recognising those who contribute to augment their sources of improvement by writing or oral instruction; and if a spirit of gentle toleration will lead those who ought to be active and zealous agents of a new faith to remain passive spectators of a silence to be deplored not less for the benefit of humanity than for the honour of our country as a scientific nation, we must not blame them, as it is an incontestable fact that the exhibition of those amiable tendencies which surround the amenities of social life with a gentle spirit of courteous indifference, is not only professionally convenient, but more conducive to personal interest and advancement than solid acquirements ever can become. But with all its advantages, both contingent and remote, it is certainly calculated to

ignore that personal independence which would lead to the sacrifice of individual interests, enforce a fair appreciation of the claims of others, although it may wound our own feelings to admit their justice, and also teach us, whilst accepting the advantages accruing from the toil and labour of a life, to remember that there are duties which ought to be reciprocated in justice, if not in honour, to the benefactors of our science. Let it, therefore, be borne in mind that, as the issues are in the hands of the profession, so likewise are the results within its power.

It is by no means foreign to the duties of a reviewer to deprecate this system of organized ingratitude on the part of the profession, as it often mars the enthusiasm of many ardent aspirants for professional fame with its honours and emoluments, and becomes subversive of the spirit-inciting abstract investigations on the part of the many, as well as the publication of didactic essays or lectures by the favoured few, whose seniority would render their opinions valuable as the records of exact experience, the results of long and laborious observation. And if any of our readers should doubt the existence of the evil to which we have alluded, we would only ask them to retrace the history of our *professional literateurs* for the last fifty years, and, pursuing the investigation by the same path which we have followed, they will candidly admit the truth of our assertions: that many, whose whole lives were devoted to the prosecution of science; who stood fearlessly and perseveringly in the van of progress, ever toiling, battling for a noble cause, when looking back for the cheering voices of those for whom they laboured, they were doomed to disappointment; that others, who wrought incessantly and laboured successfully, whose names are associated with some of the great practical lessons inculcated by the Irish school, pursued their cheerless way without a friendly greeting or appreciating reward; who, after their labours, looked to the profession their energies had enriched for the fruits of their toil, their hopes were vain, baseless, and without substantial realization. Follow out their history, and the shattered constitution, the over-wrought mind, crushed, wronged, and disappointed by cold and harsh indifference, glides unnoticed to the goal, heedless whether the laurel or cypress crowns the end in honour or in death. And even now we can recall one that left a great example to posterity, who, whilst calmly awaiting the approach of death, still lingered on the scene of toil; the faithful hand yet grasped the pen to complete the last gift to science, and the last sigh was drawn, not in anger towards the world by which he was unrequited,

but in sorrow in not being permitted to confer further benefits upon it. And again reflect on what has the profession done for those who, still living around us, have accomplished much for our science, and enlarged the character of our school beyond the limited precincts of our sea-bound mote of land? Just this much and no more:—Like an importunate beggar, it accepts those alms which its benefactor yields to his own injury, and then, in obedience to a sordid instinct, pities the weakness that dictated the unselfish gift. It is full time that this evil should cease to be the bane of scientific progress; and if our exposition of its tendencies, even in a remote degree should lead to this consummation, in asserting the privilege of the journalist, we will have achieved the object of his mission.

We have been led into these strictures on medical ethics by the contemplation of the work which now demands our critical labours, emanating from the pen of one of our most distinguished surgeons and pathologists—Robert Adams. For the last thirty years he has constantly contributed to the literature of medical science, and enriched the demesne of practical surgery, by the periodic records derived from close and patient observation. With a mind disciplined by his early career as an anatomical teacher, enlarged and systematized by his subsequent labours as a surgical lecturer, he was well adapted to profit by those extensive opportunities afforded through his appointment to Jervis-street Infirmary and the large hospitals of the House of Industry, where he pursued his investigations with unwearied zeal and diligence; and now, in obedience to the appreciation of these favourable circumstances entailing responsible action towards the profession, he, with limited time at his disposal, and even that little wrested from more pressing avocations, has, after studying the particular subject for more than a quarter of a century, published this great work on Chronic Rheumatic Arthritis. Not, we are happy to observe, from a momentary impulse to grasp a passing opportunity for professional advancement, has he appeared as an author, but with the hope that information deduced from years of individual research might be acceptable as well as useful to the profession, he seeks to render the work even more perfect by the laborious examination of the several specimens, illustrating the affection, contained in the collections of Holland, Germany, Dublin, and London; whilst the writings of preceding authors have been carefully collated and compared with the special opinions of the writer.

The work is a large octavo, consisting of fourteen chapters, the first five being devoted to the history, symptoms, anato-

mical characters, and treatment of the disease; and the remaining nine chapters constituting a precise description of the affection as it engages each individual joint in the body, the whole conveyed in a simple and unadorned style of composition, so as to be perfectly intelligible even to the junior student; whilst its systematic precision is sufficiently severe to satisfy the most fastidious reader of its pages. In addition, there accompanies the work a large atlas of lithographic drawings, illustrating the several cases quoted by the author; these, executed correctly as objects of morbid anatomy, and beautifully as specimens of art, afford an easy *perspective explanation* of all the remarkable features of the disease in the several joints, and enhance in no small degree the value of this great literary labour, to the critical examination of which we shall now proceed in the following pages.

In treating of this affection the author alludes to the preceding labours of Dr. Haygarth, of Bath, who first proposed the term "nodosity of the joints" to signify the essence of the disease; but conceives that a less objectionable nomenclature should be adopted, as the fact of those nodes being absent in the early stages of the affection might lead the practitioner to form an erroneous conception of the nature of the complaint; and therefore, guided by the causes as well as the pathological appearances, he prefers adopting the appellation of chronic rheumatic arthritis, as that by which the disease has been recognised in this country for the last quarter of a century. And this seems based on just and irrefragable grounds; for although in some exceptional cases the affection may *seem* to be purely local, resulting from over-exertion, violence, or cold, still, in the majority of cases, its constitutional association with rheumatism is proved by its following as a direct sequel to that disease; and probably an accurate history of all would establish the previous existence of some latent constitutional symptoms called into more direct development on the application of some special exciting cause; if, therefore, the term 'rheumatic' becomes admissible, its association with arthritis seems even less questionable, although Dr. Todd looks upon the disease as one of irritation rather than inflammation; but Mr. Adams, appealing to the history, progress, and symptoms of a well-marked case, insists on its inflammatory nature; and as this constitutes a question of some importance in guiding the surgeon to the adoption of a particular line of treatment, we wish to defer its discussion until the therapeutics of the malady are passed in review.

The author having alluded to the statement of Haygarth,

in relation to the greater frequency of the disease in females, justly dissents from this conclusion, but coincides with Dr. Todd in conceiving it to be of much more frequent occurrence in the Irish than in those of the English nation; an inference rather to be anticipated, when the lives of our ill-fed, overworked, and miserably clad labourers are contrasted with those of the sister country occupying a similar grade, who are maintained in comparative comfort, and, therefore, become necessarily less amenable to the causes exciting rheumatic affections. Having then premised that the disease may be purely local, attacking a single joint, or constitutional, gradually, but surely invading each articulation in succession, until the patient becomes incapable of even performing the simple motion involved in carrying food to the mouth, he proceeds to detail the general symptoms of the affection as they occur in an ordinary case. These are pain, stiffness, impaired mobility, swelling, at first soft and yielding, but subsequently exhibiting enlargements, with all the density and resistance of bone, articular crepitation on either active or passive motion, rigidity of the muscles around the joint, and effusion into the internal investments, producing a form of false anchylosis. And at page 21 he concludes the picture thus:—

"When the disease assumes a local form, and only engages one articulation, as, for example, the hip, the patient, though affected by a lameness, which every year gradually somewhat increases, as his general health is unaffected, may find out many occupations, to the exercise of which his local disease offers but little impediment. Quite the reverse is, however, the case when the disease has appeared as a general constitutional affection, and when many of the articulations of the same individual are simultaneously implicated. The patient's rest at night is then usually disturbed; he is affected by every change in the atmosphere; all the movements of his joints are painful to him. The prognosis in such a case is very unfavourable, and little in the way of remedial treatment can be relied upon.

"Those of the lower order who are thus afflicted with this as a general constitutional disease soon become incapable of earning their bread, and most of such in this country are consequently at last found inmates of our poor-houses. In these asylums they usually spend much of their time during the winter months in their beds, and even here complain much of the cold. From want of exercise, the circulation of blood through their limbs becomes languid; the joints become rigid as well as painful; the surrounding muscles, through disuse, fall into a state of atrophy. The bones and the cartilages also degenerate, and in some cases, from constant immobility of the joints for years, we have found the articular surfaces to have in points coalesced with each other, and in these points of contact a

species of red vascular union of the surfaces to have taken place (see case of M'Garry). When all the joints of the lower extremities are the seat of the disease, the patient frequently becomes altogether bedridden, and the knee-joints and those of the feet become distorted, and even dislocated. The former joints are habitually kept semi-flexed, the leg becomes rotated outwards, and under these circumstances we have known partial luxations of the patella occur. The patient usually becomes much stooped in his figure, the spinal column being flexed forward. The neck often becomes rigid, and this state of things, too, is sometimes found associated with a rigid condition of all the joints, great and small, of the upper extremities. Now, the patient, although he has laid before him food convenient for him, soon becomes really incapable of feeding himself, and thus in a certain sense becomes wholly dependent on others. I have, no doubt, observed many unhappy victims of this disease the inmates of poor-houses, who, had they been placed in more favourable circumstances as to fuel and clothing, might have lived for years with this malady, carried off unexpectedly during the winter months by sudden attacks of other diseases, such as dysentery or diarrhœa, produced by cold. Some have died of acute inflammations of some of the viscera; others of chronic phthisis."

Mr. Adams has only observed true or bony anchylosis to occur in a single case, where the first row of the carpal bones were anchylosed to the second as well as to the radius, but never in any other joint. This is a most important statement, as it is adverse to the opinion of Sir Benjamin Brodie, who maintains an opposite view on the subject. We have in our possession a large collection of morbid specimens illustrating this affection, especially in the hip-joint, and can call to mind how often we were deceived in our diagnosis in the dead subject; a mistake which even the removal of all the surrounding muscles did not remove; and when the capsule was opened and some violence used to *abduct* the head of the bone in the acetabulum, it became evident that the rigid and unyielding condition of the joint was really attributable to the dovetailing of the mutual irregularities of the articular surfaces, and the interposition of a spongy reddish vascular substitute for the normal synovial membrane, which seemed to insinuate itself into the porous canals of the diseased osseous surface. We are, therefore, disposed to believe that Sir Benjamin Brodie used the term 'anchylosis' rather to imply the physiological imperfection than the exact pathological condition induced by the affection. Although we are accustomed to class this with senile diseases, such is not always the case, as Mr. Adams has seen it occurring before twenty years of age, when its origin was constitutional. At these periods, according to our experience, it is more liable to

commence in the small joints; but, as a senile disease, it more frequently commences its ravages in the larger articulations; and these are opinions which we have seen no reason to qualify, since our review of Mr. Edwin Canton's observations on Chronic Rheumatic Arthritis, in a former Number of this Journal. Mr. Adams coincides with Sir Benjamin Brodie in stating that the affection never proceeds to suppuration or disorganization; but let it be remembered, as a fact of some practical utility, that accidental violence applied to an articulation suffering from this affection may excite inflammation,—perhaps it should be called *superadded inflammation*,—both in and around the joint, producing consequences identical with those supervening on a similar exciting cause, acting on an otherwise healthy articulation; and such a condition might easily be confounded with the ordinary results of chronic rheumatic arthritis.

The author describes the anatomical characters of the disease with a terseness and perspicuity that induce us to quote the passage. He describes them as they appear:—1. In the synovial membrane; 2. In the cartilaginous and fibro-cartilaginous; 3. In the osseous structures:—

"If we have an opportunity of making a post-mortem examination of an individual who, at the time of his death from some other disease, had been affected by chronic rheumatic arthritis in its early stages, in this case the fibro-synovial capsules of the affected joints will be seen to present evidence of having been the seat of inflammatory action of a chronic nature. These capsules will be found to be thickened, and at the same time distended, with a preternatural quantity of synovial fluid. This observation will be verified if, for example, we thus are afforded an opportunity of examining anatomically a knee or a shoulder-joint in the early stage of this disease. At this period a state of the articulation, formerly called hydrops articuli, will be seen to exist. The synovial membrane will be found to be thickened, and internally to present a red colour; vascular tufts, red and hypertrophied synovial fimbriæ, will be seen in the joint.

"In the more advanced stages the redundant quantity of fluid will be found to have been removed by absorption; and the capsular membranes of the joints to have acquired preternatural density. Thus we have seen the capsular ligament of the hip-joint to be nearly a quarter of an inch in thickness; and, as to structure, to present almost a resemblance to intervertebral substance; and, we may add, examples have not been wanting in which portions of bone have been found contained in the substance of the fibro-synovial capsules of the joints.

"When the capsular membranes have been cut through, and the interior of the joints which have been long affected exposed, we may

very generally observe that some of the normal structures have been altogether removed; in the hip-joint not a vestige of the round ligament will be seen; nor of the long tendon of the biceps or glenoid ligament in the shoulder-joint; and all the articulations, great or small, which have been long affected, are usually divested of their cartilages of incrustation.

"The interarticular fibro-cartilages, too, are also, with very few exceptions, absorbed when the disease has existed long in any joint normally possessing these structures. I have proved the truth of this observation by my examinations of the articulation of the lower jaw, and of the sterno-clavicular joints, as well as, also, by my inquiries into the condition of the wrist-joint. Not a vestige of the interarticular fibro-cartilage will be found in the post-mortem examination of these joints, if they had been *long* and severely affected by the disease.

"The same observation also applies to the knee-joint; in every well-marked case of this disease I have examined anatomically (with two or three singular exceptions), the semilunar cartilages have been absorbed as completely as the cartilages of incrustation of the heads of the bones. In one of the exceptions referred to, the cartilages were hypertrophied. In another case the semilunar cartilages were partly ossified. The fibrous brim which, in the normal state, surrounds the glenoid cavity of the scapula, as well as that which completes the cup of the acetabulum of the hip-joint, are altogether removed under the influence of the morbid processes induced by this peculiar disease.

"We may conclude that the lateral ligaments of the ginglymoid joints must be preternaturally elongated, in consequence of the necessary elongation and over-distention of the capsules, by the effusion into the joint of an increased quantity of synovial fluid, phenomena which occur in the early stages of this disease; and we may readily infer that these lateral ligaments will be very slow to recover the effects of the stretching they have been subjected to. From such causes a certain degree of abnormal mobility sometimes exists in the affected joints.

"This mobility is not always observable in advanced cases of this disease, in consequence of the semiflexed state of the limbs and spastic condition of the muscles; but we have frequently found that the lateral ligaments of the smaller ginglymoid joints, from the causes already adverted to, have become so lax as to have permitted of partial or even complete dislocation, an observation which may be illustrated by referring to many of the examples I shall have occasion to allude to.

"The capsular ligament of the arthrodial and enarthrodial joints are also very slow to recover the effects of the over-distention they too had undergone in the early periods of this disease; and these capsules, thus elongated and relaxed, may be also supposed to admit of dislocations of the bones. Hereafter, when speaking of the shoulder-joint, I shall have occasion to show that a sub-luxation of

it is by no means an uncommon result of chronic rheumatic arthritis of this joint; and I may add, that from this cause not having been generally known to anatomists and surgeons, many, very many, mistakes have arisen."

The question of foreign bodies associated with this disease lying loosely within the joint, or projecting into its cavity, is ably discussed as a separate article. Haller observed twenty of these bodies in the temporo-maxillary articulation; Morgagni, twenty-five in the left knee-joint; and the author specially remarks the case of an elbow containing no fewer than forty-five of these foreign tubercles. They seem to be the result of long-continued irritation; taking their origin without the synovial membrane, they project into the articulation, and are for some time attached by a species of pedicle which may or may not give way, determining the fixed or mobile nature of the tubercle of bone in its after stages. On this account the author recognises two forms of these abnormal appendages, fixed and movable, but these appear to be merely different stages of growth, not to imply any separate characters. They may be wholly cartilaginous, or bone with a covering of the latter material; or the relative position of these two organic elements may be reversed, and occasionally two or more may become united by their adjacent surface. We cannot say that these productions are frequently present, as we have prepared over forty specimens of the affection, and can only call to mind one solitary instance of free nodules in a joint associated with this disease; but we have very often observed the peculiar formations which the author .describes as "additamentary bones."

"Foreign bodies of this second species, which I have ventured to name '*additamentary bones*,' are usually to be found deepening and enlarging the cavities of reception for the heads and condyles of bones composing the articulations. I have only noticed these productions in joints which have been long and severely affected by this peculiar disease. When the brim of the acetabulum of the hip-joint is rendered—as it very frequently is by this disease—preternaturally deep, the increased depth is usually owing to the addition of pieces of bone which appear to me to be newly formed. These osseous productions also seem, in some rare cases, to render the glenoid cavity of the scapula larger and deeper, thus, as it were, better to accommodate the head of the humerus, which usually becomes enlarged under the influence of this disease. There is a remarkable preparation of a shoulder-joint in the Museum of the College of Surgeons in this city, which will exemplify the ultimate effects of this chronic disease on the bones of the shoulder-joint. The head of the hu-

merus is greatly enlarged; the surface of the glenoid cavity is covered with porcelain-like enamel, and its posterior margin is much deepened and widened by the addition of several pieces of bone, evidently of new formation. These, six in number, are of a somewhat pyramidal form, each being fully as large as one of the carpal bones In this case these additamentary bones seem to have been, as it were, designed by nature to enlarge and deepen the glenoid cavity of the scapula, and to make it better suited to accommodate the enlarged head of the humerus."

These occur, almost without exception, in all severe cases, particularly where the joint has been much used during the advance of the malady, appearing to be a natural effort to promote security by compensating for those structures which have yielded to the ravages of the disease in its protracted progress. The synovial membrane presents also well-marked pathological changes—it thickens in the early stage, and is highly vascular with elongated vascular fimbriæ, which he thus describes:—

"They are usually found in the recent state, highly red and vascular. Anatomists have noticed, that in almost all the joints vascular synovial fimbriæ exist at the margins of the cartilaginous surface. They are to be seen in the normal state of the joint, surrounding the neck of the femur and humerus, as well as elsewhere. These fimbriæ, under the influence of disease, become hypertrophied, and present very remarkable appearances, which have not been much noticed by pathological anatomists. Those enlarged fimbriæ, 'or vascular excrescences,' from the interior of the synovial sacs of the joints, seem specially to exist in cases in which the disease called chronic rheumatic arthritis had commenced in a joint, and they are to be found in a comparatively early period of the affection. Cruveilhier observed them in the knee-joint of an individual who had also other signs, in the same knee-joint, of the disease we are endeaing to describe in this work".

No doubt now exists as to these tufted villosities being the normal organization of the synovial membrane, and associated intimately with the secretion of its peculiar fluid; and the learned author will excuse us for reminding him that they have not escaped the attention of pathologists, as he seems to infer; for fully thirty years have elapsed since Mr. Aston Key directed the especial attention of the profession to these appendages, as being the active agent in producing erosion of articular cartilage; and in this announcement he merely mistook their exact relation to the disease, confounding an exaggerated development of a normal structure with the importance of a new formation. In all cases attended with excessive irritation

in acute, subacute, and chronic affections of the synovial membrane, these fimbriated appendages are present; in the metastatic articular inflammation of pyemia they are well marked; and after death by phthisis they are almost constantly present in the shoulder-joints, accompanied by slight erosions of the cartilage, whilst in many examples of the same disease we have detected their existence in the knee and hip-joints. The conclusion is therefore naturally forced on us, that these appearances are not special to chronic rheumatic arthritis, but constitute a pathological character common to a variety of articular diseases. The bones, as they are particularly influenced by the affection, are thus described by the author:—

"The cartilaginous incrustations which invest the articular extremities of the bones are, under the influence of this chronic disease, altogether removed; and when the disease has been of long standing, the place of the cartilage thus removed is usually supplied by an ivory-like enamel, remarkable for its fine polish and hardness. In the first-class joints, such as those of the hip and shoulder, the surface of the head of the femur or humerus becomes, in whole or part, as smooth as an ivory ball. In the ginglymoid joints, such as the knee and elbow, the place of the removed cartilage is supplied by means of patches of ivory or porcelain-like enamel, marked by parallel grooves hollowed out in the direction of the movements of flexion and extension. These grooves are usually seen on the condyles of the trochlea of the femur, and on the posterior or articular aspect of the patella.

"As soon as the cartilages have been removed, under the influence of the peculiar morbid processes which are set up by this disease, the denuded bony surfaces, not having been organized to bear the effects of friction and attrition, are partially worn away, and a smooth enamel is formed by the mutual action of the bones on each other. Around the articular surfaces, thus mechanically acted upon, bony vegetations arise. The heads of the bones, thus enlarged, and sometimes flattened, get the appearance as if they had been crushed down. The necks of the humerus and femur become gradually shorter, from a species of interstitial absorption they undergo, and, under such circumstances, we can easily imagine that any one not familiar with these anatomical characters of this peculiar disease might be led to infer, when they met with them, that they had before them specimens of fractures of the anatomical neck of the humerus, or even of an intra-capsular fracture of the cervix of the femur which had been united by bone. That such mistakes have often been made in these countries, we have unfortunately too many cases to prove; and we may cite the authority of Cruveilhier to show, that elsewhere also these appearances have been misunderstood.

" As the heads of the bones are greatly enlarged by this disease, the cavities for their reception are found to be proportionably expanded. In many cases these sockets are rendered much deeper than natural, and in others they are found shallower and otherwise deformed, as will be more particularly adverted to when each articulation shall be specially considered as affected by this disease.

" As this chronic disorder, if it be general in the system of the joints, imposes on the sufferer the necessity of being almost constantly confined to the house, or even to his bed, we might expect to find, on making a post-mortem examination of the osseous system of such patients, that we should find it in a condition approaching to atrophy; and that this is, in reality, frequently the case is not to be denied; but, on the other hand, when in our anatomical investigations we notice the articular surfaces to have been much worn by this disease, we find the shafts of the bones are variously affected.

" In some instances these preserve their normal condition; in others they are greatly enlarged in different parts, and have become, consequently, heavier than natural. This increase of weight, however, does not arise merely from the external enlargement of the bone, but, when the interior of the osseous structure has been exposed by a section having been made through it with a saw, the bones are, by this means, shown to have attained great hardness and density, as many examples, hereafter to be referred to, will verify. In one instance the lower jaw had its right ramus one inch longer than the left, and the condyle on this side was three times larger than natural. In another case of this disease, the ulna and olecranon process had attained a gigantic size.

" All these cases show that although in this disease the articular surface may suffer from the effects of weight, pressure, and friction, the parts of the bone in the immediate vicinity of the articular surfaces exhibit the effects of a preternatural growth of bone, and that even the irritation in which this disease consists, whatever it be, does not confine itself merely to the wearing away of the cartilage or the enlargement of the articular *heads* of the bones; but that, in some cases, the *shafts* and centres of the bones themselves become hypertrophied."

We have now arrived at the important chapter devoted to the treatment of the affection, and here let us premise, that whilst the details of therapeutics adapted to this disease may appear meagre, still, the author, in our opinion, has acted judiciously in avoiding the introduction of plans of treatment, sanctioned, not by principle, but based upon the wild laws of imaginative empiricism, and only calculated to mislead rather than instruct the practitioner. If the disease arises solely from irritation, as insisted on by Drs. Colles and Todd, then sedatives are indicated; but, if on the contrary, there lies at the root of the affection a low form of inflammation, then local depletion with

rest becomes an important element in treatment; between these questions, therefore, lies the issue involving the principles on which to found a system of rational therapeutics, if we are to arrive at legitimate conclusions on this important subject, connected with the patient's future comfort, or fraught with his ultimate misery and suffering. It may suit the encyclopædical tendencies of theoretical schools to enumerate a host of remedies for each disease to which the human body is liable, and to form their estimate of the treatment adopted by others, *through a standard of weight and measure.* It is to us a source of congratulation that the author has had the courage to discard that system of book treatment, so different from the absolute management of the disease at the bedside; and although his mode of treating this malady is confined within the limits of a few practical precepts, he enumerates the following methods adopted by other practitioners:—1. Thermal baths. 2. Medicated waters, natural and artificial. 3. Iodide of potassium. 4. Tincture of guaiacum. 5. Colchicum. 6. Preparations of opium. 7. Frictions. 8. Rest, Regimen. 9. Depletion by cupping or leeching. Here are nine remedies from which to make a selection, more than sufficient, in our opinion, not only to satisfy the most fastidious follower of the "divine art;" but also to do grievous bodily harm to the unsuspecting victim who may be so unfortunate as to become subject to the treatment of one of these "energetic practitioners."

We will now venture to examine the question as to the probability of irritation or inflammation being the essence of the affection. The advocates of the former opinion base their views on the facts:—1. That the usual symptoms of the inflammatory process are absent. 2. There is not effusion of plastic material. 3. Purulent formation never occurs. 4. Ulceration, or any other form of disorganization, is invariably unknown. 5. And that redundancy of tissue usually is more manifest than absorption in the progress of the affection. An analysis of these assertions will prove that many of them are gratuitous assumptions, and that the remainder are far from being calculated to illustrate the opinions they are purposed to enforce. Pain, swelling, heat, constitute the invariable symptoms of the earlier stages of the disease, and the examination of Mr. Adams' Atlas, Plate XI., will indicate that although the ancient "Rubor" may not become visible externally, yet the whole synovial membrane is intensely vascular, and the bone vessels gorged with blood. Here, then, is the last element of inflammatory action exhibited in a marked degree, which disposes of the first article of faith relied on by the sup-

porters of the irritation theory. What causes the thickening of the fibrous investments of the joints? Interstitial deposit of what? Simply the solid elements of effused blood plasma; and this, we believe, is commonly known as *lymph or fibrine.* How, again, are the osseous stalactites which surround articulations, the foreign bodies that float within their cavities, produced? According to the accepted views of morphological changes, the source could only have been the protein element of the liquor sanguinis—*fibrine.* But why is purulent formation generally absent? As well might it be asked why do joints fail to suppurate in acute gout and rheumatism, or testicles under the influence of venereal or gonorrhœal disease. In all such cases the specific tendency is manifestly directed to the production of structural transposition, but not to the evolution of abnormal elementary constituents incapable of being amalgamated with the normal tissues of the part. Whoever would take a philosophic and extended view of the pathological import of rheumatic inflammation, must admit that the skin and other free surfaces are the emunctories by which a specific poison is eliminated from the system, and *the same law governs the articular affection, modified by the anatomical condition of being closed cavities, from which the evolved products cannot escape —and here they become a new source of irritation, inducing changes in the various textures,* which might easily be anticipated; and we, therefore, coincide with the author as to the inflammatory nature of chronic rheumatic arthritis. When he states that the application of leeches in the early stages of the disease, with rest; the occasional use of colchicum and guaiacum; and in the advanced periods easy, and, in some cases, passive exercise; warm clothing; the maintaining of an equable yet high temperature of the room inhabited by the patient; and the exhibition of Dover's powder, combined with watery extract of opium,—we conceive that he exhibits a wise discretion, and one that must enhance the value of the work as being a practical exposition of cautious experience rather than a theoretical compilation of the statements of others on the subject.

It is our intention to make a few selections from the second part of the volume, or that portion devoted to a special description of the disease as it affects each articulation, and we regret that our limits will not permit us to do full justice to the author's accuracy of description; for, although forty-four pages are devoted to a consideration of the subject as it appears in the hip-joint, our extracts must necessarily be brief, and, therefore, devoid of that interest produced by the perusal of the essay *in extenso.*

"The patient complains of stiffness in the hip-joint and about the great trochanter; of a dull, boring pain, which extends down the front of the thigh to the knee. The stiffness is most felt in the morning, when the patient commences to walk; but after some exercise the movements of the joints become more free. Should the patient have walked very much during the day, the pain is always more severe in the evening. The uneasiness, however, gradually subsides after he has retired to bed. When the patient throws the weight of his body fully on the affected joint, the pain is always increased; but if the surgeon press on the great trochanter, or adopt any other expedient, so as to push the head of the bone even rudely against the acetabulum, these manuœvres are the sources of no uneasiness whatever to the patient. Although we can easily satisfy ourselves that no actual anchylosis exists, still it is evident enough that the motion of rotation is lost, and that flexion is confined within very narrow limits. When we place the patient in a horizontal position, and endeavour to communicate any of these movements to the hip-joint, he complains of some pain, and an evident crepitation can be heard and felt deep in the articulation. The affected limb has the *appearance* of being two or three inches shorter than the other; while, on accurate measurement, the real shortening will be found not to amount to an inch. This greater appearance of shortening than exists in reality arises from the obliquity of position of the pelvis relatively to the spine, and the elevation of the former at the affected side is such, that in the ordinary attitude of standing the crest of the ilium and the last short rib approach nearer to each other at this side by two inches than do those of the opposite side.

"The patient walks very lame, and with the foot and whole limb greatly everted. The nates of the sound side is unusually prominent, while that of the affected one is quite flat, and no trace of the lower fold of the gluteus is seen. The muscles of the thigh also seem somewhat atrophied; still they do not want for firmness; and we may uniformly observe that the calf of the affected limb is not inferior in size and firmness to the other. When we minutely examine the great trochanter, we find it larger and more prominent than usual; and about the situation of the acetabulum, the horizontal branch of the os pubis, and the lesser trochanter, bony protuberances can, upon careful examination, usually be recognised.

"This disease generally appears here as a purely local complaint, and, when once fully established in the hip-joint, rarely extends itself to the other articulations. We have known, however, the disease having commenced in the smaller joints, as those of the hand and wrists, subsequently to have affected both hip-joints in the same individual.

"The chronic inflammation of the various structures of the hip-joint in which the disease consists is seldom accompanied by any appreciable degree of heat or external swelling of the soft parts, and

I have never heard of the inflammation having proceeded to suppuration."

"*Diagnosis.*—When chronic rheumatic arthritis of the constitutional form affects the hip, many of the smaller articulations are similarly implicated, and the true nature of the disease becomes thereby made manifest, but when it appears as a *local* complaint, fixing itself, as it usually does, in one of the hip-joints only, then the disease may be mistaken for sciatica, or for a scrofulous affection of the joint.

"The strumous affection, however, occurs generally in children, and in persons under the age of puberty, while this chronic rheumatic affection of the hip seldom appears in any who are under forty years of age. It is true, that scrofulous caries of the hip-joint may attack those who have passed the age of puberty, but whatever is the age of the patient in the strumous case, we observe that the constitution sympathizes with the local disease of the hip-joint, whereas, in the chronic rheumatic affection of the local form, the general health is totally disengaged. In the case of the chronic rheumatic disease, the patient will allow the great trochanter to be firmly pressed inwards, and even permit the head of the femur to be pushed up with violence against the bottom of the acetabulum without complaining; on the other hand, the individual affected with the scrofulous complaint of the hip-joint shrinks back from submitting to these experiments, instinctively dreading the pain that should be induced thereby.

"When we make the patient stand as erect as he can, in the case of the strumous disease of the hip, we observe at once the characteristic attitude of the patient, and position of the affected limb, the general fulness and swelling around the hip-joint; there is to be observed at the same time the wasted condition of the thigh and leg of the affected side. In the chronic rheumatic case, it is true, the thigh will be found also reduced in circumference, but not in firmness, while the calf of the leg is as large as natural. In a word, instead of the general swelling of the nates and tapering downwards of the upper third of the thigh which is so remarkable in the scrofulous hip, there is an evident flatness in the gluteal region in the case of the chronic rheumatic affection, and in the last, behind the great trochanter (which is much enlarged and higher up than natural), the normal depression exists.

"Some of the symptoms attending on sciatica resemble those of chronic rheumatic arthritis of the hip more than those of the disease before mentioned. In sciatica the age of the patient is always mature, and the experiment of forcing up the head of the femur against the acetabulum gives no pain. In these respects sciatica and chronic rheumatic arthritis of the hip resemble each other; but in sciatica the pain extends along the back of the limb and outside of the leg, in the course of the great sciatic nerve and its branches, and the pain also comes on in paroxysms.

"In the case of chronic rheumatic affection of the hip, when it is a local complaint confined to this joint, the pain at once ceases

when the patient retires to bed, and the affected limb is relieved of the superincumbent weight; but in sciatica the pain is as severe at night as at any other time.

"When we examine the patient in the horizontal posture, the motions of the hip-joint, if sciatica be present, will be observed to be quite as free as usual; but, on the contrary, in the case of the chronic rheumatic affection, when the surgeon holds the limb, and attempts to flex or rotate the thigh, but little motion can be observed to take place in the joint of the hip, while a peculiar crepitation is perceived in it, and the lumbar vertebræ are found to be *really* the seat of many of the movements which a careless examination might lead one to suppose had taken place in the hip-joint itself. While in sciatica the limb preserves its natural direction, and is of its normal length; in the chronic rheumatic disease of the hip there is an eversion and real shortening of the limb, as well as an enlargement of the great trochanter,—all which constitute a combination of circumstances which render the diagnosis between sciatica and chronic rheumatic arthritis by no means difficult."

The author draws attention to the obscurity which may occur in a case where accident produces a fracture of the cervix femoris, the joint being at the time the subject of chronic rheumatic arthritis, and illustrates his remarks by the particulars of such an accident, which was under his care in Jervis-street Infirmary in the year 1832; and by his experience of this affection he was enabled to diagnose a fracture of the cervix superadded to the original disease, an opinion fully confirmed by a subsequent post-mortem of the patient, the particulars of which are detailed by Dr. Power with his usual perspicuity. The several morbid changes occurring in the hip-joint may be shortly epitomized in the following description:—Muscles rigid; capsule thickened, sometimes bony at points; ligamentum teres and Haversian gland absorbed (early); cotyloid ligament removed; synovial membrane vascular, tufted; cartilage absorbed at points of apposition or friction, replaced by porcelain deposit (eburnation), remainder of surface porous, and filled by a reddish vascular tissue; head of femur flattened, depressed; neck shortened, lowered; stalactites on trochanters; acetabulum large, shallow, raised towards crest of ilium; stalactites on ramus of pubis, margin of cup, and tuber ischii. Such are the usual structural peculiarities; but a deep, narrow acetabulum, with the head of the thigh-bone resembling the small end of an egg, occurs so frequently, that we are surprised such a specimen should have escaped Mr. Adams, as the only one which he quotes is in the College Museum. We have certainly more than one in our collection, and can recollect the dissection of several in addition. Sandifort

accounted for the depressed head and neck of the femur, combined with the ascent of the acetabulum, by conceiving that the disease exercised a softening influence on the bones, and that the superincumbent weight of the body caused the alteration; but Mr. Adams opposes this view on the grounds that a similar deformity results in bed-ridden subjects of the disease, and also, that in some specimens the neck ascends. There is a remarkable specimen in our collection confirming the latter remark: it is one of advanced rheumatic arthritis, in which comminuted fracture of the neck was occasioned by violence, the angle formed between the neck and shaft being more obtuse than in any normal specimen we have ever examined; but still we think that a certain degree of shortening of the neck exists almost in every example of this disease, without exception; and although this opinion may be opposed to Professor Smith, who maintains a contrary view, still our experience leads to this conclusion, which we will retain until, perhaps, a further prosecution of the morbid anatomy of the hip-joint may lead to its alteration.

The second chapter of this section, consisting of eighty-five pages, treats of the disease affecting the shoulder-joint, and constitutes a distinct and elaborate essay on the subject, replete with cases serving to illustrate and confirm the several statements of the author. Nothing is left to mere inference or theoretical assertion, but post-mortem examination becomes indisputable proof of the several peculiar features of the affection detailed in the records of valuable and interesting cases. The author states that the affection is often attributed by the patient to accident or injury, and that it may be simply local, attacking a single joint, or constitutional, appearing immediately after an attack of rheumatic fever, when both articulations are symmetrically assailed. We quote the symptoms and diagnosis in his own words:—

"The patient complains of feeling pains in the shoulder-joint, which, like those of rheumatism, are variable, and seem to be under the influence of changes in the atmosphere. He states that he feels a stiffness in the joint, and is conscious of a crackling sensation in it, particularly when he first moves it in the morning. In the very early stages of the disease a fluctuation of fluid is sometimes perceptible through the soft parts which cover the articulation anteriorly. This fluid after a time becomes absorbed, and then the shoulder presents a wasted appearance; the prominences formed by the bony processes around the joint become conspicuous. The head of the humerus is generally observed to be a little elevated, advanced, and somewhat approximated towards the median line. When we view the articulation in profile (if we may so say), the amount

of the advancement of the head of the humerus is more readily appreciated, and when we look at the joint from behind, a very remarkable abnormal depression is noticed, corresponding to the space which exists between the posterior edge of the glenoid cavity and the head of the humerus.

"If the disease be of the *local* form, and only one shoulder-joint be affected, these appearances become the more remarkable when we compare with each other the morbid and the sound articulation. As the disease proceeds, the voluntary motions of the joint become restricted within very narrow limits; the patient can abduct the elbow to the extent of a few inches from his side, but cannot elevate the arm nearly to an horizontal level. The motions he is capable of performing are chiefly confined to what are called by the patient underhand movements, yet the head of the humerus is under some circumstances susceptible of an abnormal degree of mobility. For example, although the summit of the humerus may be found (in the ordinary form of this disease) to be placed above its normal level, and to be situated several lines higher than the coracoid process; still if the arm be grasped by the surgeon, it can be drawn down, and the head of the bone may be momentarily placed beneath the coracoid process. The shoulder will then assume all the appearances usually asigned as the marks of the case styled by Sir A. Cooper '*partial luxation of the head* of the humerus *forwards* and *inwards*.' Sometimes adhesions may have occurred, which retain the humerus upwards towards the acromion, and prevent these movements: on the other hand, partial luxations may take place in other directions besides that above alluded to, as we shall just now have occasion to show.

"*Diagnosis.*—It has been already stated that chronic rheumatic arthritis may appear in the shoulder as a symptom of general constitutional disease, or it may assume quite the form of a local affection. In the former, the history of the case, the general rheumatic pains the patient reports himself to suffer from, as well as the symmetrical nature of the affection, all declare the case to be one of chronic rheumatic disease, which cannot well be confounded with any other.

"In the local form of chronic rheumatic arthritis of the shoulder, only one articulation is affected, as is the case in articular caries of the bones which form the joint. In both these last-mentioned cases crepitus is elicited on moving the articular surfaces on each other; but the efforts to produce crepitus, and the pressing together of the articular surfaces, cause, in the case of articular caries, so much pain, that the patient shrinks back from our attempts at making these trials; while, in the ordinary case of chronic rheumatic arthritis of the shoulder of the local form, we find we can press the head of the humerus firmly against the glenoid cavity without giving any pain to the patient, just as we can, in the case of the same disease when it affects the hip-joint, press the head of the femur against the acetabulum without causing the least uneasiness to

the patient. There is more pain, more wasting, of the muscles of the arm and forearm, and more sympathetic disturbance of the constitution, in the case of articular caries, than in that of chronic rheumatic arthritis: and while the former proceeds either to suppuration or to anchylosis, these, we may say, never occur in the latter."

The anatomical characters of the disease are well marked, presenting a remarkable similarity, in many respects, to those observed in the hip. This will become apparent if the reader can follow a condensed enumeration of the more elaborate descriptive details of the author:—Deltoid flattened, pale, atrophied; interstitial and structural fatty degeneration; capsule thickened, sometimes thinned, often perforated, and abnormally attached to coracoid or acromion processes; tendon of biceps absorbed, and taking its attachment from the upper extremity of the bicipital groove; sometimes structure unravelled or flattened out; tendons of supra and infraspinate muscles, with subscapular, either individually or collectively removed; synovial membrane vascular, with copious fimbriated processes; articular foreign bodies of various kinds; head of humerus enlarged, flattened; cartilage removed, porous, eburnated, with exostotic growth on lesser or great tuberosity; glenoid cavity, enlarged and continuous with an abnormal cavity, which may be formed, for the reception of the displaced head of the humerus, either on the under surface of the coraco-acromial arch, or on the outer side of the coracoid process, dorsum, or inferior costa of the scapula; acromion articular on its under surface; separation of the epiphysis, often simulating fracture.

Mr. Adams quotes the case recorded by Mr. Soden, of Bath, and those published by Mr. Gregory Smith, as indicating the liability of the most accomplished surgeons to confound the results of chronic rheumatic arthritis with the effects of injury or accident, and places Professor Hargrave's well-known case of subluxation of the head of the humerus amongst the same class. He also enters fully into the question of subluxation, as described by Sir Astley Cooper, and his remarks and critical proofs are in themselves so just and convincing that it would be an act of injustice to the author were we to avoid quoting probably the best specimen of composition in the whole book:—

"Sir Astley Cooper, in his description of the accident denominated by him '*partial luxation of the shoulder-joint forwards and inwards*' to the coracoid process, gives a case which he considered one of this accident, and relates the symptoms by which it can be recognised in the living; but for its anatomical characters he is

obliged to refer to a specimen of an abnormal shoulder-joint accidentally found in a dissecting-room, the history of which was altogether unknown. He observes:—'The only dissection of this accident which I have had an opportunity of seeing was the following, for which I am indebted to Mr. Patey, Surgeon, Dorset-street, who had the subject brought to him for dissection at the Anatomical Room, St. Thomas' Hospital.'

"'The appearances were as follows: the head of the os humeri, on the left side, was placed more forward than is natural, and the arm could be drawn no further from the side than the half way to an horizontal position.

"'*Dissection.*—The tendons of those muscles which are connected with the joints were not torn, and the capsular ligament was found attached to the coracoid process of the scapula. When this ligament was opened, it was found that the head of the os humeri was situated under the coracoid process, which formed the upper part of the new glenoid cavity; the head of the bone appeared to be thrown on the anterior part of the neck of the scapula, which was hollowed, and formed the lower portion of the glenoid cavity. The natural rounded form of the head of the bone was much altered, it having become irregularly oviform, with its long axis from above downwards; a small portion of the original glenoid cavity remained, but this was rendered irregular on its surface by the deposition of cartilage. There were also many particles of cartilaginous matter upon the head of the os humeri, and upon the hollow of the new cavity in the cervix scapulæ, which received the head of the bone. At the upper and back part of the joint there was a large piece of the cartilage, which hung loosely into the cavity, being connected with the synovial membrane, at the upper part, only by two or three small membranous bands. The long head of the biceps muscle seemed to have been ruptured near to its origin at the upper part of the glenoid cavity, for at this part the tendon was very small, and had the appearance of being a new formation.'

"The foregoing dissection, which is illustrated by an engraving in Sir Astley Cooper's work on Fractures and Dislocations, and copied into all, even the latest editions, should not, in my opinion, be considered in any other light than as an excellent account of the anatomical appearances to be found in those who have had chronic rheumatic arthritis of the shoulder-joint; for I consider that these appearances were not the result of an accidental luxation, but the true effects of this slow chronic disease. If Sir A. Cooper had known anything of the history of the case during life, we might hesitate to call in question the opinion of so eminent an authority on such a subject; but as the only grounds he possessed for forming any opinion were derived from the mere anatomical appearances observed in the shoulder-joint of the subject in the dissecting room, on this account I conceive that every one who studies the report of this dissection, accompanied as it is by an engraving, is at liberty to

draw his own conclusion as to what was the real nature of the case. To me it seems quite clear that the appearances observed in the examination of the case referred to by Sir A. Cooper were exactly those most frequently found to be the result of chronic rheumatic arthritis, as it affects the shoulder-joint: the new form assumed by the head of the humerus; the fact of the cartilage having been removed, and its place supplied by an ivory enamel; the piece of cartilage which hung loosely into the cavity, being connected with the synovial membrane at the upper part only by two or three small membranous bands; the attachment of the capsular ligament to the coracoid process,—all these circumstances, related in the abovementioned case, strongly reminds us of the characteristic traces of this disease we have denominated chronic rheumatic arthritis, as we have so often met with them. Add to this the observation that the intra-articular portion of the long tendon of the biceps muscle did not exist, or is presumed to have been *ruptured* at its origin: in all these details we find a very complete account of the anatomy of the shoulder joint, which had been the seat of chronic rheumatic arthritis.

"On the other hand, such appearances afford no evidence whatever that an accidental luxation was the cause of them. Certain it is that appearances exactly resembling those described as existing in Sir A. Cooper's specimen have been met with in cases in which their cause could not be attributed to accident, because no injury had been received; while in others it was needless to refer to accident, inasmuch as the morbid action had similarly affected *both shoulder-joints;* so that by the dissection of such cases I am convinced that disease, not accident, was the source of the morbid appearances. I have had an accurate copy made of the engraving which Sir A. Cooper has published, of what he has called the anatomy of partial luxation of the humerus, and alongside of it I have placed another of a shoulder-joint taken from the dead body of an hospital patient, who had been long affected with chronic rheumatic arthritis, and for some time under observation in hospital; and it appears to me that all who carefully read the account of the dissection of the two cases, and compare the two engravings, must admit, that whatever circumstances influenced the production of the morbid appearances in the one were identical with those which produced them in the other.

"Sir A. Cooper, in my opinion, somewhat *gratuitously* supposes that his specimen was the much sought for example of the anatomy of the accident called partial luxation. I say *gratuitously*, because the previous history of the case he alludes to was unknown, and the accident was only *supposed* to have occurred.

"In the case I have adduced and illustrated by engraving, the history was known, and has been preserved, with the account of the post-mortem appearances which the examination of the shoulder-joint presented."

In concluding the pathological characters of the disease there are still a few points to which it seems necessary to make a general reference, as opinions are more or less at variance as to their exact nature and probable causes: we allude especially to the ascent of the head of the humerus, as well as its tendency to contract partial forms of luxation. In the early stage, when inflammation distends the capsule, and its contiguity to the deltoid causes contraction of that muscle, it is easy to imagine that through this instrumentality the head of the bone is pressed against the coraco-acromial arch, inducing absorption of the long tendon of the biceps from the same cause. Such being Mr. Adams' explanation, we accept it only in the absence of any more plausible theory, because, although it may account for displacement in that particular direction, it fails when applied to the luxations (partial) inwards, downwards, and backwards, which remain as undiscovered subjects for future investigation. The same remark applies to the singular diastasis of the epiphysis of the acromion process which is sometimes observed to be symmetrical, proving therefore its independence of accident or violence; and we trust that Professor Smith, so largely quoted and deservedly lauded by the author, will direct the same analytical investigation to the elucidation of these particular features of the disease as that which he has expended in solving the pathological mysteries of Mr. Hilton's case of presumed luxation of the head of the humerus.

The third chapter occupies ten pages, devoted to chronic rheumatic arthritis of the elbow-joint, in which the symptoms are thus detailed succinctly, but at the same time with the usual precision of the author. *Symptoms.*—These are at first confounded with ordinary rheumatism, being evidenced by pain, heat, and swelling, associated with difficulty of motion, whether that be rotation or flexion, and the attempt is usually productive of well-marked articular crepitus. At first there occurs a super-secretion of synovial fluid, but subsequently the opposite condition obtains, in preternatural dryness of the surface; bursal swellings also appear in and around the articulation, particularly over the olecranon process; and it is superfluous to observe the frequency of solid enlargement of the articulation as a whole. The anatomical characters may be epitomized by a short abstract of the author's remarks. Bones, atrophied, porous, but more frequently hypertrophied and dense. Great sigmoid cavity of the ulna enlarged; diastasis of olecranoid or coronoid process; removal of encrusting cartilage; porcelain deposit with vertical sulcated surface. Head of radius sometimes square, or it may become globular, and create a glenoid depression on the capi-

tulum of the humerus for its reception. Humerus enlarged; surface altered to correspond with ulna and radius; ligaments thickened; synovial membrane vascular and fimbriated. A large number of those foreign bodies to which we have before alluded are found in the humero-cubital articulation when the subject of this disease; and these will represent various forms of consistence, being sometimes bony, or again cartilaginous; and vary likewise as to mobility, being fixed or perfectly floating within the synovial cavity: these, according to the author's statement, occasionally amounting to the almost incredible number of forty-five in one joint. Still following the systematic progress pursued by Mr. Adams, we arrive at the characters of the disease as it affects the knee-joint: these occupy the fourth chapter, consisting of twenty-six pages, in which every conceivable element of this protean malady is minutely and practically discussed, with a copious pathological illustration, drawn not only from specimens in the author's possession, but also from those in the Museums of London, Halle, and Leyden, which he examines critically, comparing them with similar preparations to be found in this country, and correcting many mistaken views of English and continental surgeons in relation to the morbid anatomy of this disease.

"The commencement of this chronic disease in the knee-joint is marked by the usual signs of subacute inflammation of the synovial membrane, such as pain, heat, and swelling. The pain is usually referred to the inner condyle of the femur and tibia, and is not very severe, so that during the early period of the disease the patient can walk much without inconvenience; but from year to year the stiffness and uneasiness felt in the joints gradually increase; while the knees are swollen and enlarged, the muscles of the thigh and leg diminish somewhat in size; still, when examined with the hand, they feel firm. The tendons of the hamstring muscles become tense, and in many cases the power of either fully flexing or extending the joints is lost. Indeed, in some instances, the patient becomes, from the gradual increase of these symptoms, incapable of walking, or even standing without assistance. The knee-joint, from the commencement of the disease, is noticed to have a strong inclination inwards, and this appearance becomes the more remarkable when both articulations are symmetrically affected. The bones of the leg are usually rotated on their long axis outwards, so that the foot is everted. Now, if the limb be kept habitually in the semiflexed position (as in those who are bedridden in consequence of this disease), and the tibia be, as above described, rotated outwards, of necessity carrying with it the ligamentum patellæ, it becomes easy to account for the circumstance which, in the advanced stage, is occasionally to be noticed, namely, that the patella may rest on the front of the

outer condyle of the femur, or may be even thrown entirely to the outside of this condyle, as it is in the ordinary luxation outwards of this bone produced by accident.

"The disease, in its early stage, is manifestly a chronic synovitis, and the effusion which accompanies the sub-inflammatory action gradually increases in quantity.

"When the distention of the synovial sac is at its maximum, we occasionally notice, besides the very considerable soft fluctuating tumour in front of the knee-joint, elevating the patella, that there is at the same time a similar fluctuating tumour, about the size of a hen-egg, projecting posteriorly into the popliteal region. This tumour leans towards the inner head of the gastrocnemius; it disappears when the knee is flexed, and becomes more tense and hard when the limb is in the extended position, as when the patient stands erect. I have known many cases of this disease thus affecting the knee-joint, in which the synovial sac of this articulation had been much distended with fluid. In most of these cases the popliteal swelling existed, and in a few instances opportunities were afforded me of ascertaining by dissection that the smaller swelling projecting towards the popliteal space was formed by the over-distention of a normal bursa which freely communicated with the interior of the larger synovial sac of the joint. When the palm of the hand is applied over the patella, in the early stages of the affection, a sensation of a preternatural degree of heat is felt; and when pressure is made on the patella, and a lateral movement across the condyles is communicated to it, a very evident roughness is perceived, either on the articular surface of the patella itself, or the corresponding surface of the trochlea of the femur, or both; and when the knee-joint is alternately flexed and extended, a characteristic articular crepitus becomes manifest. In the later stages of the disease, the subacute inflammation, with the phenomena which it presents, subsides; the synovial fluid becomes absorbed, and the patella falls back on the trochlea of the femur; the popliteal bursa also disappears, but the grating produced by rubbing surfaces becomes more evident; it is perceived by the patient himself in all his movements, and can even be heard by the bystanders.

"If at this period the surgeon make a careful examination of the joint, he will first notice that the patella is *broader* than natural, and crests and ossific depositions can be felt in different points of the femur and tibia.

"Besides, he can very frequently detect the existence of foreign bodies in the interior of the joint. Some of these foreign bodies seem superficial, small, and movable, and give us the idea that they are attached by a pedicle to bone. Others are large, and seem situated more deeply in the joint.

"*Diagnosis.*—Although this chronic disease of the knee-joint is accompanied by the ordinary symptoms of a subacute arthritis, the constitution of the patient is but little disturbed by it; the affected limb is at first capable of extension and flexion, the patient can walk

long distances without suffering much inconvenience, except a temporary increase of stiffness of the joint. He does not complain of spasmodic startings of the limb, and when the ordinary experiment is tried, of percussing the heel so as suddenly to direct the condyle of the tibia with force against the lower articular surface of the femur, he suffers no pain. Thus we learn, that the disease differs from that wearing disease, ulceration of the cartilages of the knee-joint, which, in the end, so frequently demands amputation.

"The disease of the knee-joint, familiarly called white swelling, is sometimes unaccompanied with pain, the patient at first being able to walk about, and the constitution remains undisturbed; but the local appearance in white swelling and chronic rheumatic arthritis of the knee is very different. In the former there is much wasting of the limb above and below the affected joint; the swelling is not well defined; it is elastic, with a degree of firmness. In the chronic rheumatic case, during the early stage, when swelling exists, it is soft and fluctuating, and evidently consists in an effusion into the synovial sac of the joint.

"The soft cellular membrane around the synovial sac, and behind the tendon or ligament of the patella, does not become infiltrated in the chronic rheumatic case, as it does in white swelling. On the contrary, in the chronic rheumatic affection of the knee-joint, the tendon or ligament of the patella stands out quite distinct, and presents its normal appearance where it is inserted into the tuberosity of the tibia.

"The peculiar crackling sound elicited on any movement being communicated to the knee-joint,—the rising crests and rims of bone which can be felt bordering the edges of the trochlea of the patella and the *margins* of the femoral condyles,—the enlargement and increased breadth of the bones, particularly of the patella,—all these characters, found combined in any given case of an affection of the knee, sufficiently point it out as an example of chronic rheumatic arthritis."

The anatomical characters may be briefly enumerated as the following:—Ligaments thickened and elongated; synovial membrane vascular, thickened, with numerous fimbriated processes; also pendulous excrescences depending from its free surface, appearing like the appendices epiploicæ of the intestines (Brodie), or similar to melon-seeds (Mayo); interarticular cartilages absorbed early; encrusting cartilage also removed; eburnation of the surfaces, especially patella, and trochlear surface of external condyle; exostotic points of new bone formation on the edge of the patella, also on the condyles of the femur; elongation of the internal condyle; displacement of the rotula. The author draws particular attention to the presence of foreign bodies within the articulation, and the lengthening of the internal condyle of the femur, which seems to be productive of

the peculiar deformity of the joint that marks the characters of the advanced condition of the disease; but we would remark that he has not sufficiently noticed the elongation and narrowing of the ligamentum patellæ, which appears in no slight degree to favour the displacement of that bone *upwards*, as the most usual alteration; indeed, more frequent, according to our experience, than partial dislocation of the femur either inwards or upwards and backwards. Again, whilst observing the contracted state of the hamstring tendons, he seems to have omitted any notice of absorption of the popliteal tendon on the external side of the joint, which we have observed in a few cases of confirmed rheumatic arthritis. The fifth chapter treats of the affection in the wrist and fingers, extending over thirty pages, and is replete with matter of the most interesting description, of which we will endeavour to convey a short summary, although our limits must render anything approaching to a rigid analysis simply impossible, as we have always been impressed with the opinion that criticism can only be justly applied to *a work in its entirety;* but that commentary is justifiable, however short an abstract of the subject may be that is given to the reader. These joints seem to be affected earlier as to age than the larger articulations of the hip or shoulder, and also appear to be, as a rule, associated with a constitutional tendency, and to become diseased symmetrically. Mr. Adams has two cases under his care in the Richmond Hospital, one of eighteen, the other of twenty-seven years of age. When reviewing the observations of Mr. Edwin Canton on chronic rheumatic arthritis in a former Number of this Journal, we took occasion at that period to enforce our opinion, that the rule in relation to the locality of this disease was, that in young subjects the small joints were primarily affected, and that the reverse occurred in the old. We are therefore happy to find that the author confirms our statements:

"The wrist-joint, when affected by this disease, presents a preternatural convexity on its dorsal aspect, and sometimes the bursæ here are distended with fluid. The lower extremities of the radius and ulna, more especially the latter, seem slightly displaced backwards, and are usually observed to be enlarged. When the wrist-joint has been long and severely affected by the constitutional form of the disease, the motions of the hand at this articulation become limited to those of flexion only; for abduction and adduction, confined as they are in the normal state of the joint, are now annihilated, and extension of the hand beyond the line of the longitudinal axis of the forearm is impracticable. The wrist-joint is not merely stiff, but rigid, and any attempt to move it is painful to the patient.

"In the inferior radio-ulnar articulation a certain limited degree of rotation, accompanied with crepitation, exists.

"The back of the hand ultimately presents an attenuated appearance, showing the course of the tendons, and allowing the ridges and prominences of the bones to become visible.

"All the median joints of the fingers become enlarged, as well as those which are formed by the junction of the first phalanges and metacarpal bones. The fingers are usually flexed towards the palm, and are at the same time generally much adducted towards the ulnar side of the hand. The lower extremity of the metacarpal bone, which joins with the basis of the first phalanx of the index finger, seems especially swelled and enlarged, and projects much towards the radial side and dorsal aspect of the hand. This salient angle, formed on the radial side of the hand by the flexion and excessive adduction of the fingers, is so usual, that the form thus impressed upon the hand is looked upon as quite characteristic of rheumatic gout.

"Yet, varieties do occur in the form the hand assumes under the influence of this disease, which we must not omit to mention. We have, for example, found the lower extremities of the metacarpal bones enlarged, and the first phalanges of the fingers flexed towards the palm, but not in the least degree *adducted* towards the ulnar side, and consequently, in such cases the angle of junction of the metacarpal bone with the basis of the index finger was by no means salient towards the radial side, but towards the dorsal aspect of the hand only.

"The median and last joints of the fingers are very generally found in a flexed condition, but exceptions to this rule are observed; it is by no means uncommon to find the median joint of one or all of the fingers in a preternatural state of extension, so that the first and second phalanx may form an angle with each other, salient anteriorly towards the palm, and the excess of the degree of extension may amount even to a luxation of the basis of the second phalanx on the dorsum of the first.

"Whenever the joint formed by the union of the *metacarpal bone of the thumb with the trapezium* is affected with chronic rheumatic arthritis, the line of the articulation is marked by a rising ridge of osseous growth, which can be seen and felt through the integuments; in this case the motions of the joints are impeded, but the normal direction of the metacarpal bone does not seem to be altered by the presence of this disease in the articulation, nor does any dislocation occur.

"When the disease affects the *metacarpo-phalangeal joint* of the thumb, this last is almost always preternaturally flexed, sometimes even to a right angle, and adducted at its metacarpo-phalangeal joint, while its last, or unguinal phalanx, is in a marked state of extension. Dr. M'Dowel, however, last winter session, laid before the Surgical Society of Dublin one instance in which a state of things exactly the reverse of the foregoing existed, for in this last and rare specimen, the first phalanx of the thumb was preternaturally extended, and abducted to a degree which almost amounted

to a luxation backwards, while the unguinal phalanx was flexed, so that the appearance presented was much that of the accident called Hey's dislocation of the thumb.

"*Luxations of the bones of the fingers* are frequently the consequence of this chronic rheumatic disease. The most usual dislocation I have observed is that of the first phalanx of the little finger forwards towards the palm, from the head of its metacarpal bone.

"Cruveilhier has described and delineated a case in which the bases of all the phalanges of the fingers were thus dislocated towards the palmar surface of the hand. This displacement forwards of one or all of the first phalanges, as the result of this chronic disease, is not, it would appear, of uncommon occurrence. On the contrary, luxation of the *basis* of the first phalanx *backwards* must be considered very rare. Anatomists do not speak of such an occurrence as the result of any disease, and I have seen but few examples of such displacement. However, in visiting Professor Vrolik's Museum, in Amsterdam, in August, 1847, I noticed the skeleton of a hand, which, from the appearance of the carpus, &c., I judged had long been affected by chronic rheumatic arthritis. The first phalanx of the little finger had its basis in this specimen dislocated on the dorsum of its corresponding metacarpal bone. This and Dr. M'Dowel's case, already alluded to, are the only examples of luxation or subluxation of the *first* phalanx backwards I have seen. These observations, however, it may be necessary to remark, apply only to the metacarpo-phalangeal joints, because we meet with numerous specimens of dislocation backwards at the median joints of the basis of the second phalanx on the dorsum of the first, the result of the disease."

The anatomical characters of the affection need only a brief allusion, as the previous remarks on the subject would almost lead the morbid anatomist to infer the entire system of changes occurring in those articulations. Amongst them will be observed—thickening of the ligaments; absorption of the cartilage; eburnation and flattening of the surfaces of the bones; enlargement of the styloid process of the ulna, with diastasis of that point of bone from the shaft; vascularity of the synovial membrane; disposition to the formation of *cupped and fixed* articulations in the bones of the carpus, which are likewise denuded of cartilage; alteration in the outline and axis of the articular facets of phalanges, removal of cartilage; osseous stalactites at various points, which have a tendency to fix rigidly these joints; finally, partial displacement of the phalangeal articulations is not at all a rare occurrence in the confirmed cases of the affection.

The disease in the ankle-joint constitutes an extensive subject for the display of the author's peculiar talent for ob-

servation and discrimination. He devotes the sixth chapter of fifteen pages to its examination, and states that its occurrence is rather rare in this articulation; consequently, we are led to attach a greater degree of value to a detail of its symptoms and characters:—

"In those who are affected by this disease in the ankle-joint, the malleoli, or bony eminences which mark the articulation laterally, are observed to be much more prominent than usual, and the breadth of the space between them seems increased. The joints of the tarsus are usually implicated in the same morbid action, hence the symptoms we notice are seldom referrible to the ankle-joint alone; the navicular bone and head of the astragalus, in these cases, project somewhat on the internal margin of the foot; the instep, too, becomes depressed, and the sole flattened. In such cases, also, there is a degree of swelling, the amount of which may be ascertained (if both feet be not simultaneously affected) by measuring the circumference of the tarsus round the instep and sole. The foot, too, has a peculiarity in its appearance, arising from the projection inwards of the navicular bone and depression of the instep, already adverted to, which give to it a resemblance to the morbid condition called 'flat foot.'

"The ankle-joint is found to be more or less stiff, and if we desire the patient to move it, and at the same time apply the ear close to the joint, the usual crackling or crepitus is heard.

"The *medio-tarsal joint*, that is to say, the articulation formed behind by the astragalus and os calcis, and in front by the posterior articular surfaces of the navicular and cuboid bones,—this transverse joint of the tarsus thus constituted is generally more affected by this disease than any of the other of the articulations of the foot.

"In these cases there is an obvious stiffness in this median joint of the tarsus: the patient seems to have lost the usual elasticity in the motion of the affected foot; he never seems to spring from it as he goes up stairs, and as he descends with difficulty each step, we observe him place his heel down suddenly and abruptly. The form and direction of the phalanges of the toes are observed to be changed from their normal state. The metatarso-phalangeal joint, or ball of the great toe, is generally much enlarged, and the great toe itself is drawn outwards, sometimes to the degree to cross transversely the other toes. The phalanges of the smaller toes become variously distorted; they are also generally arched, the convexity being upwards, towards the dorsum of the foot.

"The patient who is affected with this disease of the ankle and joints of the tarsus, &c., has the same general symptoms which belong to this chronic rheumatic disease, in whatever region it is situated. He, therefore, states that he suffers much during cold and damp weather; that when he first gets out of bed in the morning the joints of the affected ankle and feet are stiff, and the movement

of them painful to him; that he improves under exercise: he adds, that he is always worse on the day succeeding one on which he has much exerted himself. The patient, too, has occasionally spasmodic pains, which seem to him to start back from the toes towards the ankle-joint and front of the leg. In these well-marked cases of chronic rheumatic arthritis of the ankle and tarsus, &c., some of the other articulations, particularly those of the opposite ankle and foot, as well as of the wrists and hands of the patient, are symmetrically affected,—a combination of things which, when it exists, renders the diagnosis as to the true nature of the malady in the ankle and foot by no means difficult."

The morbid anatomy of this obscure affection constitutes a legitimate subject for further investigation. As yet, the details of its pathological features being few, we hope that subsequent examinations will be more fruitful of results: such changes as have been observed are confined to the following—vascularity of the joint, appendages yellowish and opaque; appearances of the encrusting cartilage of the astragalus and tibia, with an antero-posterior sulcation of the surfaces corresponding to the axis of motion enjoyed by the articulation. *There is never eburnation* of the surface.

The author quotes Professor Smith's observations on the disease in the tarsus, and also Mr. Canton's account of the peculiar deformity resulting from rheumatic arthritis of the first metatarso-phalangeal articulation, a representation of which is beautifully delineated in the accompanying Atlas.

In the seventh chapter Mr. Adams gives an historical sketch of the disease as it occurs in the temporo-maxillary articulation; and after ascribing its first description to Cruveilhier, who denominates it "a wearing out of the cartilage," he adduces, as the second recorded instance of the affection, his own two cases, one of which he brought before the Medical Section of the British Association at Bristol, in 1836, and then entered fully into all its pathological characters. Its symptoms are not well marked, and it may or may not be combined with other marks of the disease in the articular system generally. There is pain, stiffness, and the patient hears a crackling during the motions of the jaw, the deformity which results being influenced by the fact as to whether one or both articulations are affected. The anatomical characters are—flattening of the articular surfaces; absorption of the cartilage; shortened or lengthened neck of the condyle; very slight eburnation. But any joints in this locality that we have examined seemed indisposed to throw out those osseous vegetations so remarkable in the extremities. Nature, apparently aware of the penalty incurred by the vir-

tual, if not absolute immobility produced by these exuberant vegetations, fails to close the assimilating portal, altering the morbid condition to suit the exigencies of a process essential to life.

The eighth chapter includes the disease in the sterno-clavicular and acromio-clavicular articulations. Here, as in other situations, it may be local, confined to a single side, or, having a constitutional origin, become developed symmetrically. Stiffness and evident enlargement, with crackling (articular), are its manifest symptoms, whilst thickening of the surrounding ligaments, with osteal nodosities, and alterations in the encrusting cartilages, complete its anatomical characters. The concluding chapter shortly treats of the affection in the spine, as evidenced by pain, stiffness, alterations in configuration of the column, and crepitation on motion. Our experience fully coincides with that of the author, and Mr. Canton and Professor Smith, that the disease is rare in the lumbar region, still less frequent in the dorsal, but often well marked in the cervical section, particularly in the trochoid articulation of the atlas and axis, when slighter traces of its ravages will always be discerned in the lower articular facets of this region. This terminates the descriptive portion of the work, which contains, as an appendix, about sixty pages devoted to the details of cases illustrating the statements advanced by the author. These, together with the Atlas of drawings, with which they are so intimately associated, must be carefully collated, in order to realize their value and appreciate their utility as practical records of hospital experience, carefully and truthfully transmitted to the profession for its future guidance in the diagnosis and treatment of chronic rheumatic arthritis.

We have now arrived at the conclusion of a laborious, but not unpleasing task, purposed to bring the work of the learned and accomplished author fully before the profession in the pages of what may perhaps be termed the national exponent of medical literature in this country; and, whilst trusting that we have accorded that justice to Mr. Adams which he richly deserves, we have endeavoured to elicit a similar sympathy for his labours from all those who feel an interest in the advancement of our common profession. Fully aware of the high motives and disinterested feelings which prompted the publication, as well as cognisant of the sacrifices involved in the accomplishment of the task,—we feel that anything like laudatory commendation would be equally unworthy of our position and distasteful to the author's wishes; we, therefore, terminate our lengthened notice by expressing our gratitude

to him for the sentiment which induced him to publish a work which, while augmenting a reputation deservedly acquired, is also calculated to confer fame and honour on our country as a school of practical surgery.

Lectures on Diseases of the Stomach, and Indigestion. By CATHCART LEES, M.B. T.C.D., Physician to the Meath Hospital, Lecturer on Practice of Physic in the Original School of Physic, Peter-street, F.K. & Q C.P.I., and Vice-President of the Dublin Pathological Society. Dublin: Fannin and Co. 1857. Fcap, 8vo, pp. 237.

Pathological and Practical Observations on Diseases of the Alimentary Canal, Œsophagus, Stomach, Cœcum, and Intestines. By S. O. HABERSHON, M.D. London, F.R.C.P., Assistant-Physician to Guy's Hospital, and Lecturer on Materia Medica and Therapeutics, &c. &c. London: Churchill. 1857. 8vo, pp. 387, with four plates.

DISEASES of the chylopoietic organs must ever command an important place in the attention of the practising physician, not only from the frequency of their occurrence and the serious and fatal results so often arising from their immediate and secondary effects, but also from the great discomfort and not seldom total inaptitude for all the more important pursuits of life, produced by even their so-called functional derangements. The medical press has of late years been fertile in works treating of these diseases; indeed, the great advances that have been made in physiology and in textural and physiological anatomy, in animal chemistry and in pathological science, had rendered a reconsideration of our views respecting them necessary.

Of the works that we have now to bring under the notice of our readers, the first on the list takes a more limited range than the other—Dr. Lees treating only of the diseases of the stomach. He has, he informs us in the preface, been in the habit of lecturing on these diseases during the last ten years. The perusal of the twenty-two Lectures, now published, will prove how well he has fulfilled his purpose—"the great use of systematic lecturing consisting," he says, "in the communication of whatever is known on the subject, confirmed by the opinion and experience of the lecturer." The Dublin School of Medicine may well be proud of the pre-eminently practical character of its teachings, and the manner in which attention

has been directed to the study of the natural history of disease.

The clinical lectures that have issued from the press, such as those of Carmichael on "Venereal Diseases," the world-known "Clinical Medicine" of the illustrious Graves, and the admirable "Lectures on Fever" by Corrigan, are in themselves sufficient to stamp the character of the instruction given in the Dublin hospitals. The volume now before us proves that the successor of Graves in the Meath Hospital, who is too well known to the readers of this Journal by his many communications to its pages to need any special commendation or introduction at our hands, has carried into the school and class-room the same zeal for truth, and appreciation of the necessity for founding all teaching on its only certain basis—clinical observation, assisted by close research—which distinguished his great predecessor.

The work of Dr. Habershon embraces a greater variety of subjects, treating of the diseases of the alimentary canal throughout its entire extent. In this respect it resembles that of Dr. Abercrombie, and on perusal it will be found to resemble it also in the mode in which the subjects are discussed.

In comparing this work to that of Abercrombie, we have already stamped it with a mark of high approbation; we may, therefore, the more freely point out what we consider a defect, one which might have been avoided by following more closely the example that the author seems to have set before him.

In Abercrombie's work, as in this, the subjects treated of are illustrated chiefly from cases that came under his own observation,—no doubt a great merit, indeed the greatest merit in any book; but, as it cannot be expected that the experience of any man could afford illustrations of all the important diseases to which even one set of organs is liable, we find that Abercrombie makes use of the writings of others, either in reference to points that had not come under his own notice, or to confirm or modify the conclusions at which he had himself arrived, thus adding greatly to the usefulness and completeness of his treatise. Now, in Dr. Habershon's work we have a vast amount of most valuable information, yet there is scarcely a subject discussed on which additional and important light might not have been thrown by a freer reference to the writings of others, and this without adding materially to the bulk of the book. There is, moreover, throughout, a tendency to ignore everything out of London, and to praise and uphold the more immediate colleagues of the author, that is unworthy of science. In one instance, that occurs to us as we write, the

effect is to lead uninformed readers to attribute to others one of the greatest improvements in therapeutics, for which we are justly indebted to the conjoined labours of Graves and Stokes. The passage of which we complain may very possibly have been written without any such intention, but it is an error against historical truth, such as should be guarded against. It occurs at page 92, where, speaking of the opium treatment of peritonitis after perforation, it is said:—"A most interesting and rare case of recovery, after apparent perforation, is recorded by Dr. Hughes and Mr. Hilton in the Guy's Reports. The plan adopted was the one I have mentioned." Now this, we have admitted, may have been written without the intention of attributing the plan of treatment to the persons indicated; but we contend, that if names are to be mentioned, the honour is due to Graves and Stokes. It is adduced here as an illustration of the system—a system which has led to the remarkable fact, that the writings of Irishmen are scarcely alluded to (indeed at this moment we can only recollect allusions to two[a], and in both instances the names are incorrectly spelled), though Dr. Habershon's readers—who are familiar, for example, with the essays of Carmichael and Fleming on pharyngeal abscess; of Lees and Osborne on diseases of the stomach; of Marsh on the regurgitating disease; of Stokes on enteritis and peritonitis; of Mayne on dysentery; and with the Reports of the Dublin Pathological Society published in this Journal, &c. &c., will, we have no doubt, consider that he would have rendered his work much more useful and correct if he had been as extended in his researches, and as impartial in his references, as Abercrombie.

In proceeding to bring before our readers a sketch of the mode in which are discussed such of the various points in the two books as seem worthy of notice, either from their novelty or their importance, it will be convenient to take Dr. Habershon as our guide, and follow him through the course of the alimentary canal.

After an introductory chapter, in which the tissues entering into the formation of the canal, and their actions in health and disease, together with the object of remedies and their mode of action, and the relations of the associated diseases, are briefly reviewed, he enters on his subject with the consideration of disease of the œsophagus.

Dysphagia is one of the most prominent symptoms of disease, not only of the pharynx, but also of the œsophagus; the

[a] "Maunson and Evanson;" "Dr. Lyon."

following causes of it are assigned:—I. From disease of the tonsil or palate. II. From diffused inflammation of the areolar tissue of the pharynx or œsophagus, or from local suppuration, sometimes in connexion with disease of the spine. III. From disease of a laryngeal cartilage or epiglottis. IV. From functional or spasmodic stricture of the œsophagus or pharynx, as in hysteria, hydrophobia, &c. V. From paralysis of the muscles. VI. From acute inflammation of the mucous membrane. VII. From mechanical injury or poisons. VIII. From structural obstruction of the œsophagus, as—1, constriction; 2, ulcerations sometimes communicating with the larynx; 3, cancerous disease; 4, obstruction from the pressure of aneurismal or other tumours.

To this list we may add the three forms of dilatations described by Rokitansky and Mayo; dislocation of the os hyoides, mentioned by Abercrombie; and affections of the pericardium, of which cases are given by Bleuland and Testa, an analysis of which, by Dr. Stokes, is given in an early Number of this Journal,[a]—one was during life regarded as angina pharyngea; and thoracic inflammations generally, where, according to Stokes, the dysphagia is due less to any mechanical condition, such as pressure on the œsophagus, than to some excited irritability, either of that tube or of parts immediately in contact with it, occurring in the earlier or very first stages of pericarditis, when there is very little effusion, and disappearing in the more advanced stages; whilst it is rare in hydropericardium, and in cases of empyema with extensive displacement; the aphonia in some cases of pneumonia is considered by Stokes an analogous symptom, depending on an excited irritability[b].

Dr. Habershon considers in detail the several forms of dysphagia that he has mentioned; we may pass at once to the eighth class of cases, arising from *organic obstruction* in the four forms indicated. The history and close attention to the symptoms will alone distinguish these cases from one another; in some of which Dr. Habershon hopes remedial means may be used which have hitherto not been attempted; whilst in others it is evident nothing can be done for cure, though the symptoms may be mitigated. It is for *annular constriction*, from the contraction of effused lymph and *non-cancerous ulceration*, that these remedial means are proposed. It is admittedly difficult to distinguish these cases from those of a malignant character.

[a] Testa on Dysphagia as a Symptom of Carditis: first series of this Journal, vol. xiv.

[b] Diseases of the Heart and Aorta.

The age of the patient, the duration of the disease, and the history of the case, especially as to whether there had been a discharge of pus or evidence of an abscess, or whether caustic poison had ever been swallowed, are important features in the diagnosis. Dr. Habershon suggests, in addition, a microscopic examination of the matters found on a bougie after it had been passed.

The consideration of organic stricture of the œsophagus must at the present awaken painful feelings in the mind of every lover of medical science; and here we must ask to be allowed to leave our authors for a brief space to deplore the loss physiological science has lately experienced in the death, from this cause, of one of her most devoted and ardent cultivators, who has probably done more for the advancement of physiology and practical medicine than any one of the present age. It is true that the peculiar views he advocated have met with many opponents, and indeed the present writer has, on other occasions, contended against many of these peculiar doctrines, yet he, and all, must fully admit the important services of Marshall Hall, and the vast influence exercised by him in advancing physiological science. His death, as is well known, was caused by organic stricture of the œsophagus, of long duration, and entailing much suffering; yet the present Number of this Journal contains a notice of a work composed by him when suffering from this sad disease,—a work in which he lays down directions for the applying to the saving of life of the principles he had so ably contributed to the deducing of from his favourite science, and one which ever must be regarded as a wonderful example of enthusiastic devotion to the cause of humanity. A brief outline of his case will not be inappropriate here. The disease commenced fifteen years before his death; but though much care was required in the act of swallowing, and regurgitation was frequent, the dysphagia was not very troublesome till the end of 1855; from this, till his death in August, 1857, it caused him much suffering, the degree of difficulty, however, varying remarkably. In April there was a complete interruption to the passage of fluid for twenty-four hours; the following day he could again swallow, but at the end of the month, if more than three teaspoonfuls were attempted to be swallowed one after the other, a fourth would bring on cough, and the whole would be returned by nose and mouth. During the month of May *he suffered much from hunger*, but taking nutritient enemata appeared to nourish him to such an extent that he was able to bear the erect posture, which he could not, a fortnight previously, owing to vertigo.

In the beginning of June this extreme dysphagia continued; but about the middle of the month a vast improvement occurred, and for three or four days consecutively he ate a fair dinner of lamb and asparagus, and swallowed it all. In July he could only swallow a pint or a pint and a half of milk in the course of the day; and in August, the *rectum beginning to cease to be able to retain the enemata*, he became weaker from day to day, and died on the 11th, aged 67 years. On examination, a remarkable valvular stricture was found in the œsophagus, opposite the eighth ring of the trachea, with considerable thickening and induration.

The details of such a case, independently of the interest attaching to them as having occurred in the person of Marshall Hall, must prepare us to give an attentive consideration to any proposal of a mode of treatment calculated to lessen the pains of a death arising from starvation. Such a proposal is made by Dr. Habershon, but here we must allow him to speak for himself:—

"The treatment, he says, is exceedingly unsatisfactory; the spasmodic contraction of the ulcerated part prevents the passage of œsophageal tubes; no food can be swallowed, and the administration of nutritient enemata prolongs life only for a few days or weeks. It is painful to find, after death, that simple ulceration of the œsophagus or a fistulous communication with the trachea, is the only existing disease, and that if food could have been introduced beyond this point, life might have been prolonged. The operation of œsophagotomy is a very difficult one, and in many of these cases, if performed, would be quite ineffective, because the disease is often situated at the root of the lung, or behind the first bone of the sternum; in either case the operation could not be performed below the seat of stricture. It having been found that the peritoneum may be divided without fatal result, and without the terrible effect seen to follow from ruptured viscera, the propriety of forming a gastric fistula in some of these cases is worthy of very serious consideration. It appears certainly warrantable, as it would afford a chance of life to those who have only a prospect of certain death. In the human subject several cases of gastric fistula accidentally produced have been recorded, and the experimenter on animals has purposely made such openings, under the influence of chloroform, without the production of severe peritonitis."

Since the publication of this work, a case in which a gastro-cutaneous fistula was formed by an hysterical girl has been brought before the Medico-Chirurgical Society by Dr. C. Murchison, which we may notice in connexion with this proposal. This girl had performed many extraordinary feats,

such as patients of this description are often guilty of, and had actually entered an hospital to have her arm amputated, in consequence of diseased appearances produced by a tight ligature that she had placed round the shoulder. Some time afterwards she had a seton inserted at the epigastrium; this she allowed to ulcerate out, and then, by keeping a penny piece pressed on the part, she kept up the ulceration, till at length it penetrated the stomach, and formed an opening. Three years afterwards this was found to measure four inches in the transverse direction, and three vertically. Dr. Murchison, in detailing this case, gave the particulars of twenty-five cases of fistula that he had found recorded. Of these it appears seven were produced by mechanical injury, thus—by incised wounds, 3; gunshot do., 2; contused do., followed by abscess, 1; ulceration from without caused by pressure, 1. In eighteen cases the fistula was produced by internal disease, six of which were by cancer, and twelve by perforating ulcer. These illustrate the feasibility of nourishing the system through a fistulous opening. An operation to form such an opening would, no doubt, be an heroic one, yet we think the proposal is well worthy of the serious consideration Dr. Habershon asks for it.

Cancer of the œsophagus is next considered. We shall only stop here to draw attention to the frequency with which lung disease was found in connexion with it, a point not alluded to by Rokitansky or other recent writers. Of the thirteen cases recorded, in only one did death appear to result from inanition, and then not altogether free from disease of the lung. In 7 of the cases there was pneumonia; in 2, gangrene of the lungs; in 1, acute bronchitis and laryngitis; in 1, pleurisy; in 1, cancer of the lung, with great congestion; and in 1, death from inanition. As to the causes of the frequency of this complication the following are assigned:—1. The pressure or destruction of the pneumogastric was followed by acute pneumonia on the same side, or by gangrene. 2. The extension of the disease to the bronchi set up, if not pneumonia, bronchitis, or laryngitis. 3. The sloughing of the cancer was followed by septic changes in the blood, and consequent inflammation of the lungs. 4. Cancerous growths, or tubercles in the lungs, acted as the cause of congestion or inflammation. 5. Strumous disease of the lung already existed.

The rapid progress of this disease may assist in the diagnosis from simple stricture. Of the thirteen cases, the longest period which elapsed between the commencement of the dysphagia and death was fourteen months; in several the interval was from three to seven months; and in two still less.

Diseases of the stomach are treated of as organic and functional. The tendency of pathological science is to remove many diseases from the class of functional to organic; and we may reasonably expect that, as we become more familiar with the minute structure of the tissues, we shall discover that many more of the diseases that have been considered functional will be connected with structural changes. In this progress there is not a little danger of error, in consequence of the imperfect knowledge we yet have of minute structure, and of the difficulty of observation; and we must be careful to be guided in our inductions from the appearances after death by the symptoms manifested during life.

The vast number of tubular follicles that secrete the gastric juice and open on the surface of the mucous membrane perform the most important part in the process of digestion. Handfield Jones has directed much attention to the appearances presented by these follicles after death, as well as to those presented by certain structures resembling the solitary glands of the intestines, whose presence in the mucous membrane of the stomach has only lately been proved, and whose function throughout the whole tract—whether they are organs of excretion, or whether they are minute vascular glands, exercising a modifying influence on certain elements of the blood, or lymphatic glands connected in some way with the commencement of the lacteals and the process of absorption—is not yet ascertained. Dr. Jones has, we say, directed his attention to these structures, and described as morbid, certain appearances found in them, but which he was not able to connect with any symptoms presented during the life of those in whom they were found. Both of our authors notice these researches. Dr. Habershon has investigated the matter for himself, and has observed appearances precisely corresponding to the descriptions and drawings of Dr. Jones,—such as the wasting of the follicles, the nuclear deposit around them, and the development of cysts, which he has been able, in some cases, to connect with symptoms of great prostration and exhaustion, and complete loss of appetite, without either pain, thirst, or vomiting. These changes are the result of degeneration. Dr. Habershon attributes them to the impaired influence of the sympathetic ganglia, and compares them to the changes which take place in the muscles of a paralyzed limb, where we are able, he says, to "trace distinctly the cause to its effect." In such an explanation we cannot concur. In the very case adduced in illustration, the experiments of Dr. John Reid distinctly prove that the degeneration is due to the failing nutri-

tion, in consequence of the inaction of the muscles, and not to the loss of nervous influence, and that, when they were kept in action by galvanic shocks, they retained their healthy structure notwithstanding this loss. We dwell on the point because it is frequently one of great importance; and we are convinced that the more closely we adhere to the great principle established by Schwann, of the independent vitality of each elemental structure of the body, and of its inherent powers of growth and nutrition, the more correct will our physiology and pathology be; and we have noticed that Dr. Habershon frequently calls in the aid of the "organic nervous influence," "the ganglia," and the sympathetic nerves, to explain phenomena with which we think they have no connexion.

Dr. Lees follows Jones in ascribing these alterations to nutritive changes. There are many sources of error in observations on these structures, which are well pointed out by Dr. Habershon, such as the effects of decomposition, of digestion after death, and of obliquity in the section prepared for the microscope,—all of which he has found to produce appearances resembling the atrophy of the secreting cells and the nuclear deposit described by Jones; and an interesting case is given, in which the development of gas by decomposition produced appearances closely resembling the cysts formed by the degeneration of the solitary glands.

The history of the views held by pathologists as to the *softening of the stomach* as a morbid process during life, and its solution after death by the action of the gastric juices, is a remarkable one. When John Hunter first enunciated the doctrine of post-mortem digestion, it excited great interest; however, the observations of others not corresponding with his (probably from being made without sufficient accuracy as to details), the matter was, in a great measure, lost sight of; and when Carswell re-stated, in 1830, the doctrines of Hunter, they excited as much surprise as if they had not been heard of before. It was thenceforth believed that there were, at least, two forms of gastric softening,—one, a morbid change, occurring during life, the gelatiniform softening of Cruveilhier—and the pulpy, the effect of the action of the gastric juice after death. Recently a new view has been held, Dr. Budd asserting that all the forms of softening are the result of the digestion after death. Dr. Habershon adopts this view, following Dr. Budd implicitly. In Dr. Lees' Lectures we have a return to what we consider the more correct doctrine, and cases are brought forward in support of it; one of which we shall quote as being, we believe, conclusive on the subject, and fully

proving the accuracy of the views entertained by Andral, Cruveilhier, Louis, Rokitansky, &c. The case was brought forward by Dr. Hutton at the meeting of the Dublin Pathological Society, December 18, 1847. It occurred in a child aged eight years, who was admitted into the Richmond Hospital for strumous ophthalmia. She had a pale, scrofulous appearance, and was reported by her parents to be liable to indigestion, but in other respects she seemed to be in tolerable health. She was treated by blisters and bromide of potassium, under which she improved considerably:—

"Her appetite, general condition, and animal spirits, became very good, and the cornea of one eye had nearly resumed its healthy appearance. It was observed that she had a remarkable desire for the fat of meat, and would eat with avidity the portions that other patients left. She was regular in her bowels, and was never heard to complain of pains in her stomach. The treatment was continued with little intermission until the 14th November, 1846, when, in the evening, she complained of nausea. On the succeeding day she vomited at intervals for some hours; this ceased early in the afternoon of the same day. The resident pupil reported that she had no pain or tenderness of the abdomen, but complained of headach; her pulse was quick, and easily compressed.

"On the morning of the 16th she was evidently sinking, but still complained only of pain in her head; the extremities were cold, and her pulse scarcely perceptible. In the evening she became comatose, and died on the following morning.

"In ten hours after death, the autopsy was carefully made, and revealed the following extraordinary appearances:—There were the usual general evidences of peritonitis, effusion of lymph, &c. The stomach lay collapsed. It was removed with great care, and accurately examined. At its cardiac extremity there was a very large rent, four inches in extent, and there were two or three small oval openings, about a quarter of an inch in diameter, in the vicinity of the rent; on examining the coats of the stomach, they were found extremely attenuated at its cardiac extremity, thus accounting for the extent to which this organ had been torn. The serous membrane, to a considerable extent in the neighbourhood of the laceration, was almost laid bare, the mucous membrane having entirely disappeared, leaving only the serous, with a few muscular fibres. The pyloric end of the stomach contrasted remarkably with the attenuated cardiac extremity, for there the coats were unusually thick; very little appearance of inflammation was manifested on the internal surface; there was scarcely any vascularity, nor was the mucous membrane of the pyloric extremity at all softened. In *the ileum there were two or three attenuated* patches, but no ulceration. This absorption of the inner coats of the stomach without inflammation was, Dr. Hutton observed, somewhat analogous to the condition

described by authors as the result of digestion after death by the organ itself; but the subjects of such cases have generally been known to have taken a full meal a short time before a sudden death. In the present case the laceration seemed to have taken place in the efforts of vomiting, and the result was probably facilitated by the hypertrophied state of the muscular coat at the pyloric extremity. The existence of the extensive peritonitis indicated that the laceration occurred some time before death. From the appearance of the first occurrence of nausea and vomiting to her death, three days elapsed."

We would also point out, in addition to the empty state of the stomach, the symptoms during life, and the evidence of peritonitis found after death; that the case occurred in the winter season, the cold of which is, according to Dr. Budd, most unfavourable to digestion after death.

The *inflammatory states* of the stomach are next noticed. There is a symptom that is often met with in cases of this kind that neither of our authors make much mention of; indeed Dr. Habershon does not allude to it at all, though it is by no means of rare occurrence,—we mean the green vomiting, with which all our readers must be familiar. This is frequently spoken of as bilious vomiting. The researches of Dr. Frazer have, however, led him to believe that this fluid is really modified blood, and that though it may be mixed with bile, it is frequently entirely free from it. He states that the small masses which float through it and give it its peculiar colour are, and in this we can confirm his statement, clots in which blood corpuscles can be seen on microscopic examination. The symptom evidences, then, an effusion of blood, and indeed sometimes alternates in the discharges with red blood. Dr. Frazer has been able to restore to it its red colour by supplying oxygen. Why it assumes this green colour is not as yet known; but the green colour assumed by the body in decomposition is an analogous instance. It is not necessary that we should further dwell on these subjects; they are well treated of by both authors.

Chronic ulceration, or the "perforating ulcer," is considered to be a result of inflammation by Dr. Habershon. Some of the inflammatory states, he says, always precede it, and he describes the edges of the ulcer as rounded and elevated, the submucous tissue being thickened, and the centres depressed. There is no mention whatever made of the ulcer without thickened or elevated edges, or other signs of inflammatory action, which, in our experience, is the more frequent, and is evidently the result of a local failure of nutrition, and conse-

quent molecular disintegration. The lectures on this subject by Dr. Lees are much more on a level with the knowledge of the day than the remarks of Dr. Habershon, which are, indeed, the most defective in his volume. We have so recently gone over the principal feature of this form of disease in reviewing Dr. Brinton's work, that it is not necessary that we should extend our remarks on it at present.

The source of the blood in cases of *hematemesis* is, in some cases, far from being evident ; in the absence of ulceration many still believe it to come from the capillaries by transudation, notwithstanding the large size of the red corpuscles. After pointing out the various causes of hemorrhage, as when it arises from ulceration, from a congested or obstructed portal circulation, vicarious menstruation, cancerous disease, a vitiated condition of the blood, as in purpura, or from aneurism,—Dr. Habershon states that an examination of a portion of intestine distended with blood, from diseased mitral valve, and presenting spots of ecchymosis, will show what is probably the course of the change that takes place. Some of the capillaries will be found beautifully injected, and others collapsed, with blood extravasated around them, but restrained by the basement membrane, thus constituting a point of ecchymosis. If the basement membrane had given way, the escape of blood would have emptied the capillaries, and no ruptured vessel have been observed. A similar action takes place in the stomach; we find ecchymosis there, but the action of gastric juice prevents our observing the changes with the same facility. There is little doubt that the capillaries are in this way over-distended, then ruptured, constituting the ordinary form of hematemesis when no ulceration has taken place. In vicarious menstruation, the local congestion of the mucous membrane leads to a similar transfusion of blood; but in purpura hæmorrhagica, Dr. Habershon believes the hematine is probably acted on, and the corpuscles broken down, so that actual exosmosis of coloured serum takes place.

Vomiting is a symptom always demanding strict investigation as to its cause. Dr. Lees has devoted his eighteenth lecture to its consideration. It may be, he says, "essential," that is, arise from some derangement in the natural secretion of the stomach itself, or from congestion and inflammation, or some structural change in that viscus. 2nd. It may be what he terms "morbific," that is, arise from some morbid state of the blood, as in fevers, pyemia, uremia, &c. 3rd. "Mechanical," as from coughing, over-distention, pressure, external or internal, as by enlarged viscera or other tumours; obstruction at the

pylorus or intestines. 4th. "Sympathetic," as in early pregnancy; cerebral disease, of which it is sometimes, as shown by Graves, premonitory:—

"In all feverish complaints," he says, "when, during the course of the disease, the stomach becomes irritable without any obvious cause, and when vomiting occurs without any epigastric tenderness, you may expect congestion or incipient inflammation of the brain, or its membranes."

Sympathetic vomiting may be also produced by a calculus in the kidney or ureter, gall-stones, disease of the uterus, and tubercular disease of the peritoneum. In rupture of the heart it is often one of the earliest symptoms, so as to have given rise to suspicions of poisoning; and in disease of the peritoneum it is a frequent symptom. 5. "Nervous," that is, vomiting induced by some modification of innervation of the stomach, or independent affection of the gastric nerves, unconnected with any change of structure, or apparent cause of irritation in either that viscus itself, or in any other part of the system. The vomitings caused by strong mental emotion, and in hysteria, are examples of this form, to which may be also referred the "regurgitating" vomiting so well described by Sir Henry Marsh in a late number of this Journal (May, 1851). Dr. Lees concludes this practical and interesting lecture with an account of the sarcina ventriculi, and the conditions under which it occurs.

Dr. Lees devotes his next lecture to the consideration of that most obscure and unmanageable affection, gastrodynia. However, we cannot at present dwell on this, or on the other functional diseases of the stomach, but must occupy the rest of our space with some of the points brought forward by Dr. Habershon as to the diseases affecting the remainder of the intestinal canal.

The fifth chapter is devoted to the *duodenum*, opening with a brief sketch of the anatomical and physiological relations of this organ. The diagnosis of the diseased conditions of the duodenum is necessarily involved in much obscurity; the appearances observed in some cases have, however, convinced Dr. Habershon that the existence of some of these conditions might have been recognised during life, but he does not seem to us to have contributed much to their elucidation. His remarks on cases of *mechanical obstruction* are the most interesting in this section. In the course of several years he has observed, or found recorded, cases of this kind, arising from the following causes:—1. Gall-stones, of large size, having ulcerated through the coats of the gall-bladder, have become impacted in the duo-

denum, and led to fatal obstruction; 2. Enlarged glands, infiltrated by cancer, compressing the second or third part of the duodenum; 3. Diseased pancreas; 4. Hydatid disease of the liver opening into the duodenum; 5. Foreign bodies. The diagnosis of the seat of the obstruction is interesting in reference to the operation sometimes proposed in internal obstruction. The points indicating the affected portion of the canal, that he chiefly relies on, are the *early* supervention of vomiting, and its bilious and non-stercoraceous character, and the absence of distention of the abdomen. In reference to the quantity of urine, as a sign of the seat of obstruction, as mentioned by Dr. Barlow, he considers it as one worthy of attentive observation; the early vomiting, and the obstruction high up in the canal, preventing the absorption of fluid by the vena porta, and its consequent transmission to the kidneys. There are several interesting points as to the occurrence of jaundice, in connexion with disease of the duodenum, discussed by Marsh in the Dublin Hospital Reports, and by Stokes in the Cyclopædia of Practical Medicine, which have been overlooked by Dr. Habershon.

Muco-enteritis and enteritis are the subjects of the sixth chapter. There is some confusion among writers as to these terms. Dr. Habershon includes not only the more severe cases in which there is inflammation of all the coats, but also those in which there is little more than the mucous membrane affected, "muco-enteritis." The disposition in these latter cases is for the disease to extend along the mucous membrane; in the former all the coats are implicated. Both commence in the mucous membrane.

The aggregation of the symptoms of muco-enteritis constitutes, he says, infantile remittent fever, the intestinal disturbance being—

> "The source and the cause of the continuance and extension of the disease, and not, as in typhoid fever, the manifestation of a previously existing and general condition."

Many writers of great authority might, no doubt, be referred to as holding this opinion; yet we think, with Churchill, "that if we carefully examine the simpler and milder cases, we may find ground to doubt the existence of any inflammation, and be more inclined to look on the gastric symptoms, in some cases, as a complication, rather than as an essential in the disease. We must necessarily discard the evidence of morbid anatomy, because our obtaining any may be the consequence of some complication foreign to the disease."

The pathological appearances in muco-enteritis are often

very slight; adhesion of a thin stratum of fæcal matter is an indication of an imperfect secretion of mucus, or a lymph-like exudation resembling diphtherite may be found, and on its removal an injected surface. The mucus found in the intestine, or that evacuated, sometimes presents indications of rapid changes having taken place; nuclei and elongated cells of incomplete epithelium are found in great abundance, also crystals of triple phosphate, but these may be the results of the decomposition of the mucus. Aphthous ulcers and enlarged solitary glands, with surrounding grey discoloration, also occur.

In *enteritis* affecting all the coats, constipation is a marked symptom, so as to resemble cases of mechanical obstruction; the inflamed muscular coat cannot propel the contents. The most intense form occurs in cases of strangulation, but it may occur without it.

Some valuable remarks are made on the diagnosis of these affections. We quote the following for their practical interest:—

"It is difficult to distinguish some cases of *chronic*, or even *acute poisoning*, from enteritis from other causes. In these, inflammation of the mucous membrane is produced. I may refer to cases of chronic poisoning by arsenic: the vomiting is often very severe and the irritability of the stomach a very prominent symptom, but never stercoraceous; the abdomen is generally less tender than in the worst cases of enteritis; but in doubtful cases we must be guided by the concomitant symptoms, and the analysis of the vomited matters. In the enteritis from crude indigestible food, and that from substances classed as poisons, as from some forms of mushrooms, from copper, &c., the symptoms may be very similar, so much so that we may be unable to distinguish the one from the other."

Again, in reference to *cerebral disease:*—

"It is not unfrequent to find vomiting a symptom of disease of the brain, and that with constipation; but there are some peculiarities in this state that distinguish it from enteritis and mechanical obstruction. There is no pain or distention about the abdomen; the tongue, the countenance, and the other symptoms of disease are different. In a case of this kind, in a man about 30, which came under my own observation, where local suppuration was found to have taken place between the membranes of the cerebellum, near the medulla oblongata, the stomach rejected food of every kind, often with considerable violence; the bowels were constipated, and there was slight tenderness in the abdomen; but the disturbance of the cerebral functions of the senses showed the character of the disease. In young children it is sometimes difficult to distinguish muco-enteritis from true hydrocephalus; there is irritability of the stomach in both, perhaps diarrhœa, heat of skin, startings in sleep, loss of appetite,

unwillingness to be disturbed, &c.; but, in the former, the abdomen is more distended; in the latter it is collapsed; the tongue is injected: furred in one, clean in the other. In hydrocephalus, also, there is a greater pain in the head, or drowsiness, disturbance of the pupils, contracted, or, in the later stages, widely dilated, with strabismus, or distention of the fontanelles. The vomiting in hydrocephalus is often induced by only raising the body from the recumbent posture. In the exhaustion that occasionally follows severe diarrhœa or muco-enteritis in infants, a series of symptoms resembling hydrocephalus, or, as it has been called, hydrencephaloid disease, supervenes; these, however, are very different from true hydrocephalus; they should be borne in mind, lest the effect of exhausting disease be misinterpreted: in these we have the half-closed eye, the emaciated expression, diarrhœa, collapsed fontanelli; and the early symptoms are seen to commence in abdominal, not cerebral disease."

By attention to the circumstances here detailed a correct diagnosis may generally be arrived at. Yet all who have seen much of the diseases of children will be able to recall cases in which they have, even after careful investigation, felt much doubt as to the correct diagnosis, and have been obliged to be guided by the progress of the case. There is one circumstance, not alluded to by Dr. Habershon, which has often afforded us assistance, that is, the distinct remission of the symptoms in the morning that mark cases of infantile remittent or muco-enteritis. The occurrence of the "green vomit" in an obscure case of gastro-enteritis in an adult, under our observation, served to confirm the diagnosis.

Strumous disease of the alimentary canal is next treated of, as observed under the following forms:—1. As it occurs especially in infants,—diarrhœa, with or without strumous disease of the mesenteric glands, often induced by, and in many cases leading to uncontrollable purging. 2. Primary disease of the mesenteric glands. 3. Tubercle in the peritoneum, and strumous peritonitis in its several forms. 4. Tubercle in the mucous membrane with enteritis, leading to softening, ulceration, and perforation, as is often observed in phthisis. 5. Tubercle in the appendix cæci. In this chapter we have some valuable remarks on tuberculosis, and the influence of this state of the system on the course of diseases arising from other causes. On these, and many other points, we would gladly dwell, could we afford space. One passage we must notice before leaving this chapter. Speaking of tubercle in the mucous membrane in phthisis, it is said:—

"The presence of *fistula in ano*, as a complication of phthisis, is frequent, and it is a question upon which opinions are varied, whether

the division of the sphincter is advisable. Most surgeons, at the latter stages, would dissuade from the operation; but, in the earlier condition, before there is any disorganization, the removal of a depressing and exhausting discharge may tend to re-establish health, or, at least, to considerably prolong life."

In this there are two points calling for observation, first, as to the frequency of fistula in ano as a complication of phthisis. All who have read Louis' Researches on Phthisis will remember the terms in which he speaks of this subject. Andral, he says, met fistula in ano but once in about 800 subjects labouring under tuberculous diseases in various stages; he himself had not been more successful, but he can, he says, "readily account for the common error on the subject, by the habit still adopted by many medical men of making analyses of their cases by the aid of memory—that is, of attempting impossibilities—and of obstinately refusing to count, in cases where it is obvious that process cannot be dispensed with." We confess that we have ourselves formed the opinion that on this subject Louis is erroneous, and, looking back in our memory, we can recall more than one case of fistula in ano out of far less than 800 cases of phthisis. And almost all writers on diseases of the rectum unite in describing fistula as a frequent occurrence in phthisical subjects. The second point we wish to notice is as to the propriety of operating in such cases. Our own experience is, that there are very few cases in which the circumstances indicated by Dr. Habershon exactly occur; yet we can admit there are cases that would be benefited by an operation: there are, however, two facts that should be carefully considered before deciding on this proceeding:—First, the increased rapidity with which phthisis sometimes progresses after a fistula has been healed up; and, secondly, the great difficulty often experienced in healing the wound in such cases.

We must pass over the chapters on disease of the cæcum and appendix, and on diarrhœa. The tenth chapter is on *colitis and dysentery.* The views of Rokitansky are adopted, with some slight modifications, on the pathology of these affections. Dysentery seems to be of much rarer occurrence in London than it is in Ireland, and there are many points which have been discussed in the pages of this Journal that do not seem to have come under the notice of the author. Pyemia and suppuration of the liver he has only seen once; and this, he tells us, nearly accords with the experience of Dr. Baly, at the Milbank Penitentiary, which seems to be the principal focus of dysentery in London. In Dublin pyemia and phlebitis are by

no means unfrequent complications; Dr. Mayne has recorded many examples. In chronic dysentery he met with many cases of adhesive phlebitis, especially giving rise to a state resembling phlegmasia dolens. In acute cases suppurative phlebitis was more common: in one remarkable case it manifested itself chiefly in the vena innominata. Dropsy was another complaint often met by him, affecting most frequently the arachnoid,—in which cases there were some remarkable symptoms of nervous derangement. Next in frequency was the pleura, then the pericardium, the peritoneum almost invariably escaping. Spontaneous salivation was another symptom often met by Dr. Mayne.

Dr. Habershon doubts the contagious nature of the disease. Instances of the apparent spread of it, by this means, may be accounted for, he says, by remembering—1st, that in many of these cases there is a general pervading influence, miasmatic or otherwise; 2nd, that the effluvia from the dysenteric discharges are exceedingly offensive; 3rd, that animal effluvia are themselves sufficient to induce the complaint. That the depressing effect of night-watching, and of witnessing the rapidly fatal termination of the disease, tends also to induce the complaint. There is a circumstance mentioned by Dr. Mayne that bears not a little on this subject:—Mothers, he says, affected with the disease in the slighter degrees, persisted in nursing their children, yet these did not become affected with it. With regard to the treatment, Dr. Habershon's views are different from those our experience has led us to form. Mercury he only recommends with Dover's powder, followed by castor-oil, for removing irritating substances; but he believes it unwise and uncalled-for to persist in its use. Dr. Mayne regards mercury, in small doses, as being as useful in the early stage of dysentery as it is in peritonitis, and in his hands it was by far the most effective treatment. Ipecacuanha, Dr. Habershon speaks highly of. It appears to him to have as good an effect in inflammation of the alimentary as of the respiratory mucous membrane, in relieving the congestion, and so restoring the healthy secretion. Dr. Mayne found it perfectly ineffectual. A variety of astringents are mentioned by Dr. Habershon as having been used. With regard to this class of remedies, Dr. Mayne found that in the early stages they were unsuited, and in the chronic they were of doubtful efficacy. Tannic and gallic acid were tried by Dr. Habershon, but he was disappointed in their efficacy. In a late Number of our Journal, Dr. Young described a form of asthenic dysentery, with hemorrhage, in which he found great benefit from

a combination of these with opium and quina. Dr. Habershon draws the following conclusions from his cases:—

"1st. That dysentery, in a severe form, arises in our own country, and is not of unfrequent occurrence.

"2. That the cause of death in some is the extent and severity of the affection.

"3. That some die from perforation and fæcal abscess.

"4. That pyemia follows some of the worst forms of English dysentery.

"5. That the constriction of the intestine sometimes leads to abscess in the parietes, and artificial anus.

"6. That, in the worst cases, astringents and opiates are ineffective.

"7. That injections and demulcent remedies afford considerable relief, and in mild cases will alone be sufficient, but are inferior in their efficacy to astringents and opium.

"8. That rest, even in mild cases, is desirable. Many cases occurred in his own practice, where these means checked the purging and restored to health.

"9. That, as far as can be judged, mercurial preparations would have been injurious."

The remaining chapters we must hurry over. One is on *typhoid disease of intestine*, which he regards as a special diseased action taking place in the glands of the intestine, consisting in the effusion of an abnormal product into the substance of the glands, an exudation apparently from the capillary vessels, composed of a blastema which undergoes but little development, consisting of an immense aggregation of granules, and of some large cells containing nuclei. The next chapter is on *colic*, in which the arrangement of Dr. Copland is adopted. The following one is on *constipation*. In both, many valuable suggestions will be found. Then we have a chapter on "*internal strangulation, intussusception, and carcinoma*" of the intestine, associated together, probably, from their producing insuperable constipation. The varied conditions producing this state are often spoken of indiscriminately as ileus, but by care they may, we are told, be divided into several classes; the period at which the vomiting sets in, and the quantity of the renal secretion, being important items in the diagnosis. Attention is drawn to the following numerous causes of insuperable constipation:—

"As forms of internal strangulation, we observe it—

"1. Arising from bands of adhesion, the result of inflammatory action; or simple adhesion, without constricting bands, as of the ileum to the uterus.

"II. From a congenital intestinal pouch becoming adherent.

"III. From the appendix cæci assuming a fixed and adherent position.

"IV. From the twisting of the intestine, of which Rokitansky gives three forms—1, upon its own axis; 2, upon the mesentery; 3, upon other coils of intestine.

"V. Tumours developed in the mesentery leading to constriction.

"From other allied causes:—

"VI. Intussusception.

"VII. Cancerous disease of intestine.

"VIII. Contraction of cicatrices, as after dysentery, fever.

"Besides these, we must also enumerate—

"IX. Enteritis and peritonitis.

"X. Impaction of fæces, or of foreign bodies, as gall-stones, &c.

"XI. Obscure forms of hernia, as into the obturator foramen, &c.

"XII. Prolapsus ani and inflamed hemorrhoids.

"XIII. Abdominal or pelvic tumours.

"Abercrombie," the author proceeds to say, "describes cases of ileus in which no cause of strangulation was detected after death, and he believed them to arise from a spasmodic state of the intestine; in others that only a portion of the walls of the intestine were strangulated in hernia, without the whole caliber being constricted, and that all the symptoms of insuperable obstruction were the result. In the former we believe that either enteritis was present, or the bowel was twisted; in the latter, that spasmodic contraction rendered a partial impediment complete."

We would simply place side by side with this last sentence the following quotation from Abercrombie, whom our author seems to have misunderstood, and remark that we believe, with Abercrombie, that many cases of constipation must be attributed to loss of action of the muscular coat (2nd edition, p. 51):—

"In finally comparing the two doctrines of spasm and loss of action with over-distention, two points must, I think, be conceded:—1st. That the former is entirely assumed and gratuitous, and that no direct proof can be adduced of its actual existence in the intestinal canal, or certainly not in such a degree and such continuance as could possibly explain the phenomena of a protracted case of ileus. In regard to the contracted portions of intestine in the cases, also, it may be argued that their very existence in that condition in the dead body may itself be considered as a proof that this was the healthy state of the empty intestine, and not the result of spasm, for we cannot conceive such a spasmodic state continuing twenty-four or thirty hours after death."

In reference to impacted fæces as a cause of insuperable constipation, we would remind our readers that it is not always so; such cases sometimes present the delusive feature of diarrhœa, a channel being made through the impacted mass by which liquid fæces are evacuated from above, as explained, we believe, by Dr. O'Beirne. Very recently we had a case under observation in which fluid fæces escaped by the side of an impacted mass, and in which the supposed diarrhœa was cured by the expulsion soon afterwards of this mass.

The remaining chapters are, one on *intestinal worms*, and one on *perforation of the intestine from without*, and the book closes with a valuable index of the illustrative cases, in addition to the general index. The extent of our notice sufficiently indicates our estimate of its value.

Anteckningar till Föreläsningar i Patologisk Anatomi, hållne vid Karolinska Mediko-Kirurgiska Institutet. Af Gustaf von Düben, t. f. Professor i Patol. Anatomi. Första Häftet. Stockholm: 1857. P. A. Norstedt och Söner. 8vo, pp. 127.

Notes of Lectures on Pathological Anatomy, delivered in the Carolinean Medico-Chirurgical Institute. By Gustaf von Düben, Professor of Pathological Anatomy. First Part: Nutrition, Atrophy, Hypertrophy, Inflammation, Destructive Processes.

This concise and well-arranged volume of Notes or heads of Lectures on the important and interesting subject of Pathological Anatomy was published at the request of the pupils who had attended the course. The Lectures, seventeen in number, were delivered during the Spring Session of 1857, and were consecutive to a five and a half months' series of post-mortem examinations performed at the Seraphim Hospital. They were designed partly to present to the pupils a connected review of what had been demonstrated more in detail in the examinations alluded to; and partly, with the aid of numerous specimens from the extensive Museum of the Institute, and of a number of drawings, to supply what had not been elicited in the course of the practical investigations. The author adds, that his lectures contain scarcely anything original except his criticisms upon the views of others.

In order to be able to compare the healthy and diseased

conditions of the system, and to decide what is and what is not pathological, the author commences with a recapitulation of some physiological laws, chiefly relating to the theory of nutrition, which he considers under the three heads of development, growth, and maintenance. In speaking of wear and tear he observes:—

"It has been demonstrated that mental exertions are attended with a great consumption of the constituents of the brain, as is indicated by the increase of phosphates in the urine after speaking, composition, &c. Is oleo-phosphoric acid consumed? These phosphates are also increased in cases of inflammation of the brain. Weariness of mind is referrible to the same circumstance. The mind is immaterial, and cannot grow weary; but the material through which it manifests itself is consumed, and must be renewed by rest. It is blunted with years, which is furthermore a proof of gradual senile degeneration."

The most important of the conditions necessary for healthy nutrition are enumerated by the author as—

1. A suitable state and composition of the nutritive fluid.
2. A regular supply of the same in or near the part to be nourished.
3. Normal influence of the nervous system.
4. A natural state of the part to which the nutritive supply is destined.

The author enters at some length into the consideration of each of these conditions. In speaking of the first, after some remarks on the vitality of the blood, and on symmetrical diseases, as examples of the reactions of different portions of the body themselves, he shows that the several parts act as excreting organs; thus the bones remove phosphates, and the hair removes carbon from the blood; while the presence of an excess of hydro-carbon in the vital fluid determines a formation of fat, not merely fatty degeneration, but the production of adipose tissue; for example, the development of subcutaneous fat in drunkards, &c.

Under the second head the author directs his attention chiefly to two circumstances which have of late received more attention, and acquired a greater degree of importance, than was formerly given or attributed to them: the one, the coagulation of the blood in the vessels of the living subject, affecting the nutritive fluid; the other, the nourishment of non-vascular parts, affecting the parts to be nourished. The former includes the process of thrombosis, or the formation of emboli,

recently investigated by Virchow, Senhouse Kirkes, and others; the second relates to the nutrition of tendons and fibrous tissues, elastic cartilage, the cornea, &c.

The author adduces many illustrations of the effects of nervous influence upon nutrition. Thus the olfactory nerve, the optic nerve, the third, fourth, and sixth pair of nerves, and the facial nerve, may all be destroyed, without any lesion of nutrition manifesting itself in the nose or eyes. But, destroy the sensory and sympathetic portion of the trigeminus, and ulceration commences often within twenty-four hours, and destroys the eye in three days.

The fourth condition is *a normal state of the part to be nourished;* if the type is not good, neither will the antitype be good. The accuracy of assimilation in the healthy state has often been illustrated. "The same is found to exist in diseased parts; when the tissue of a part has been injured by disease, we find the injury, so to speak, perpetuated by assimilation. The morbid process no longer continues; but its result remains, and in this the assimilative process goes on under the same law of like formation as in the healthy condition.

"Thus, for example, a cicatrix may grow and assimilate equally with the parts immediately surrounding it. A cicatrix in a child, once fully formed, may grow with the child, and maintain the same dimensions throughout the entire of life. But another rule influencing assimilation also exists, which is, that a certain tendency to a return to the normal condition is simultaneously at work. In virtue of this, cicatrices may, while they grow to maturity, at the same time grow out.

"This assimilation, even of morbidly altered tissues, seems to be the reason why certain diseases attack the body only once. When, for example, the poison of small-pox has once been introduced into the blood, it attacks the entire mass of the latter through multiplication or in some other manner, altering its whole composition; the disease runs its regularly defined course, and the blood finally returns *apparently* to its former state. But this is in reality no longer such as it was before, for the same poison of small-pox does not now produce the same effect on it; the change developed on the first infection was made once for all; during the rest of life the blood assimilates its nourishment according to the type once altered; the blood is henceforward formed unsusceptible, because the change which should be wrought by the poison has already taken place in the blood.

"In another series of diseases an opposite condition exists, namely, that when a certain disease has once occurred in

an organ, the latter is thenceforward more liable to be attacked by the disease. The cause of this difference is not easily explained; but we may content ourselves with stating, that this circumstance illustrates the same fact as that established in the case of small-pox, namely, the reproduction of particles resembling their predecessors, even in their susceptibility to morbid influences.

"We have seen from the example of the cicatrix, that tissues, after the lapse of a considerable time, return to their normal state. This may be assumed also to be the case with the blood, as we see that diseases which usually attack the body only once occasionally return a second time, but seldom oftener.

"This assimilative power of the blood causes that, in general, every substance introduced into that fluid is perpetually maintained in it through a species of propagation, a transmission to every new generation of the elementary parts of the blood. This explains the persistence of certain chronic diseases, for example, syphilis. The chancre may be healed, but roseola breaks out; this disappears, but ulcerations arise in the throat; these contract and heal, but nodes appear, &c. The use of specifics, or the natural tendency to recovery, may restore the normal condition."

We have quoted the foregoing remarks at length, on account of their bearing upon points of practical importance; the author continues:—

"In all this we have further illustrations of the above-mentioned accuracy of the formative process; it seems as if an impression made upon a single particle of tissue or of blood should be perpetuated for years in its successors. In like manner also is the soul, the memory, circumstanced with respect to the brain. Every mental impression, every intellectual act, leaves a given definite impress upon some particle of the brain; reflection on the idea, or the carrying of it out, passes away, perhaps in a second; the particle of the brain affected perishes, but it leaves it to its successor to propagate for ever a once received impression. If a man endeavours to recollect past things, the soul seeks in the brain the effects preserved, or rather the resemblances, of the changes which preceded the impressions or thoughts produced there; and if the change is found, the man remembers what he sought. But in this impression on the cerebral particles, as in the cicatrix, lies a tendency to the restoration, in the course of time, of the normal condition. The impression on the particle of the brain may be lost or concealed, and the soul, unaltered in its immortal nature, unchangeable

by anything terrestrial, no longer finds in the brain a trace of what has passed away."

Somewhat similar are the remarks of our own great writer on the human understanding, who, while he does not directly allude to the "metamorphosis of tissue," seems to admit, in a passage we have always admired, that the different physical constitution of the brain in different individuals may to a certain extent account for the varied degrees of memory they enjoy.

"Thus the ideas," observes Mr. Locke, "as well as the children of our youth, often die before us; and our minds represent to us those tombs to which we are approaching, where, though the brass and marble remain, yet the inscriptions are effaced by time, and the imagery moulders away. The pictures drawn in our minds are laid in fading colours; and, if not sometimes refreshed, vanish and disappear. How much the constitution of our bodies, and the make of our animal spirits, are concerned in this, and whether the temper of the brain make this difference, that in some it retains the characters drawn on it like marble; in others like freestone; and in others, little better than sand, I shall not here inquire: though it may seem probable, that the constitution of the body does sometimes influence the memory; since we oftentimes find a disease quite strip the mind of all its ideas, and the flames of a fever, in a few days, calcine all those images to dust and confusion, which seemed to be as lasting as if graved in marble."

After some additional remarks on normal nutrition, the author passes to the consideration of the lesions of this function, which he classifies under the heads of atrophy and degeneration; hypertrophy; inflammation; and new formations. We shall refer only to those points which we consider most interesting or important.

Atrophy and degeneration differ in this particular, that the former is a change in quantity alone, the latter in both quantity and quality. Of the several subdivisions adopted by the author of this part of his subject, we shall select for some consideration that on fatty degeneration, which he states to be the most general and most extensive of all degenerative processes.

Fatty metamorphosis is one of the processes by which in the normal state the *effête* particles are prepared for resorption and removal from the body, and as physiological changes are to be regarded as types of those which are pathological, the author describes in detail one or two instances of fatty alterations of the former class. The first he adduces is the involution of the uterus after parturition. This process, whereby the uterus is,

within less than two months, reduced from its acquired weight of about a pound and a half to its normal weight of from one and a half to two and a half ounces[a], is perfectly physiological, and is, in fact, an atrophying fatty metamorphosis, which, as such, may serve as a type of numerous pathological changes. "The proper substance of the uterus undergoes a metamorphosis to molecular fat, so complete, that of the uterus before parturition not a single fibre remains. This metamorphosis does not begin until between the fourth and sixth days, nor later than the eighth, and is tolerably uniform everywhere, though it is later in the cervix; subsequently, however, we find the inner layers more advanced in change than the outer. In the individual muscular cells this destruction commences at many points at once; first their curves are lost, their outlines become paler and yellowish, sometimes granules appear arranged in rows, frequently destroying the extremities of the cells first, because they are thinnest. Their nuclei are pale, but distinct, until the increased number of fat globules conceals them. Resorption must now proceed very rapidly, for simultaneously with these changes the volume of the uterus is considerably diminished. The organ becomes brittle, loses its red colour, and assumes a dirty yellow appearance. During the fourth week, when the uterus has almost returned to its normal condition, we usually see the first traces of new formation in the outer layer of its body, where nuclei, cells, and filaments occur. While the last portions of the muscular substance fall asunder and are resorbed, the new substance is developed in a number of points, so that in many cases the uterus at the close of the second month is completely newly formed. Veins and capillary vessels are altered in the same manner; their walls participate in the fatty metamorphosis, after that, in consequence of the contraction of the uterus, they have probably long ceased to carry blood. The part where the placenta had been attached exhibits some points of dissimilarity to the rest of the uterus. The veins are there filled with plugs, and as the surrounding uterine substance is atrophied, these stand out as prominences, so that the part in question presents during from four to six weeks an elevated surface of the size of a dollar. Subsequently the thrombi are resorbed, under ordinary circumstances, and the part becomes smooth; sometimes, however, we find it still elevated after the lapse of many months. The reconstruction of the mucous membrane has not as yet been fully explained."

[a] Heschl, Wiener Zeitschrift, vii. 2, page 228. A translation of Heschl's Observations on this subject, by, we believe, Dr. Robert M'Donnell of this city, has been published by Messrs. Fannin and Co.

The foregoing is adduced by the author as an example of physiological fatty metamorphosis, a deposition of molecular fat in the elementary parts, a process which takes place with uniform consumption of these parts, at their expense, with bursting of their molecules, and preparation for their resorption in the form of detritus. The secretion of milk is brought forward, on the other hand, as an instance of physiological fatty degeneration in a limited sense, a separation of fat coalescing to form drops, and taking place without consumption of the elementary parts which simply burst from repletion, but are not resorbed or changed to detritus, so that the part is not atrophied, but increased in volume. In pathology the case is somewhat different; but here also the foregoing will, in its leading characters, be found to apply.

The author next proceeds to the description of fatty atrophy as a pathological process, in some organs and tissues; in the nerves in paraplegic patients; in stumps left after amputation, &c.; in the muscles, in consequence of inflammation, paralysis, general deposition of fat, &c.; in the muscular structure of the heart, fatty change of which seems to be nearly connected with fatty change in the vessels of the brain.

"Although scarcely properly belonging to fatty change, I think it well, in connexion with fatty degeneration of the muscles, to mention two forms of muscular atrophy specially put forward by Rokitansky. One is muscular anemia. A high degree of anemia, caused by obstruction to the supply of blood, is followed, like the thickening of blood in cholera, by a tonic spasm in the muscular fibres, which produces, first, laceration of single muscular fibres, or of larger bundles, afterwards whitening, and lastly, a breaking up of the muscular fibres. The muscular bundles lie thick and knobby in the withered connective tissue. On microscopic examination, several are seen, in addition to the ordinary fibres, thick, varicose, presenting band-like transverse striæ, while many are torn; in some swollen parts many fibres are found reduced to a state of molecular detritus, occasionally mixed with pigmentary granules, like what Bowman has found in the muscles of persons dead of tetanus.

"The second change is the reduction of the muscles to a state of molecular detritus, which occurs not merely, as we shall hereafter see, as a result of inflammation and gangrene, but also with atrophy of paralyzed muscles. Such a change takes place in the so-called progressive muscular atrophy. The muscles become of a pale or dirty red colour, and are flaccid, easily torn, or dry and brittle. On microscopic examination some of the fibres are still distinctly transversely striated; on others the

striæ are indicated merely by small nodules; on others all transverse striæ have disappeared, though the longitudinal remain; of many the parts have been broken up into detritus."

The author concludes this portion of his subject with descriptions of fatty change in the capillaries of the brain; in the connective tissue, as a striking example of which he adduces the *arcus senilis* in the eye; and in the fatty liver of drunkards; the last being one of the most ordinary instances of fatty change engaging an entire liver.

"We have hitherto spoken of fatty atrophy only as affecting normal tissues; but we shall hereafter see that it is equally common in pathological productions; and we shall at the same time find that it is one of the most important forms for the destruction of exudations."

The following chapters treat of hypertrophy, inflammation, destructions, and colloid and amyloid degeneration. The author, in concluding this first part of his work, announces as the subject of his next lecture the progressive results of inflammation, and new formations.

We have already stated that Professor von Düben disclaims for the volume we have just noticed any originality beyond his own remarks on the labours and statements of others. He has, however, produced, so far as it has as yet gone, a remarkably clear, concise, and trustworthy Manual of Pathological Anatomy, and has epitomized therein the results of the latest observations of the numerous distinguished investigators who are at present occupied in the cultivation of that important branch of medical science. In this point of view the work is calculated to be highly useful; and it will, we feel confident, add to the high reputation the author has already earned for himself as a zealous and successful labourer in medicine and its collateral sciences.

A Treatise on Diseases of the Heart. By O'Bryen Bellingham, M. D., F. R. C. S. I., Chairman of the Court of Examiners, Royal College of Surgeons, Ireland; Surgeon to St. Vincent's Hospital, &c. Dublin: Fannin and Co. 1857. Part II. 8vo, pp. 258 to 623.

The present volume forms the continuation of a treatise on Diseases of the Heart,—the first part of which was published in 1853, and was reviewed at length in the November Number of our Journal for that year. In the preface to the preceding portion of his work, Dr. Bellingham states what was the design of

its publication—"to give a concise, though sufficiently complete description of the heart in health and disease." Before his treatise appeared in a connected form, the author had been well known as an original thinker and a close reasoner upon this subject; and the results of his observations, which appeared from time to time in the pages of the "Dublin Medical Press" and the "London Medical Gazette," were favourably received by the profession. Encouraged, therefore, by this verdict of approval, Dr. Bellingham changed the form of his work from the more familiar appearance of clinical lectures to the more normal, though scarcely more instructive, shape of a dissertational treatise. The whole work, he tells us, underwent, besides, a careful revision; the advances made in cardiac pathology by other writers have been noticed, and the author has given from his own researches a large amount of additional information.

For the more convenient consideration of the subject, Dr. Bellingham divided his work into two parts. The first of these, according to his own words—

> "Contains a description of the healthy heart, its size, weight and the measurement of its chambers and orifices, followed by sufficiently full details respecting its motions and sounds. The examination of the heart in disease is then entered upon, commencing with the physical signs; the general signs, and the secondary or remote symptoms of cardiac disease, are described in succession."

We thus perceive that the first part was intended by him to form an extensive introduction or prolegomena to the second or practical portion of his subject. From the amount of information upon the several heads noticed above, and which is more complete and perspicuous than is to be found in most works on cardiac pathology, we looked with some anxiety for the fulfilment of the author's promise of issuing soon the concluding portion. But with deep regret we learned that enfeebled health deferred its execution, and just as the author was about to enjoy the satisfaction of closing a task which had become a labour of pleasure, death interposed, and terminated an honourable and useful life at a period when the mental powers are yet in their prime. While, therefore, we deeply deplore his removal from amongst us, we receive with gratification the completion of his labours, and it remains for us now to consider them with the same impartial examination as if their author were still open to correction, or sensible to praise.

As the second portion of the work is taken up as a continuation of the preceding, it is published without a preface,

and we turn to the former volume for the notice of its subject matter:—

"The second part is devoted to the individual diseases of the heart, which are arranged according as their seat is the investing membrane, the lining membrane, or the muscular tissue of the heart, followed by a description of the functional or inorganic affections of the heart."

To this account Dr. Bellingham subjoined the consideration of thoracic aneurism, a subject which had long engaged a considerable portion of his attention.

The volume now before us consists of seventeen chapters, numbered consecutively after the nine of the preceding part. Of these the two first contain an account of pericarditis in its various details, so fully treated of as to form more than one-fifth part of the second volume; the next four chapters are devoted to diseases of the endocardium and the varieties of valvular disease; the five following are severally occupied with the consideration of disease of the muscular tissue, dilatation of the cavities, fatty degeneration, cardiac aneurism, and rupture. A chapter is given to that curious coincidence first fully described by the late Dr. Graves[a], consisting of enlargement of the thyroid gland, and prominence of the eyes, with increased action of the heart. The following chapter affords the reader a succinct description of the inorganic affections of the heart, and the four concluding give an account of the adventitious deposits in the thoracic aorta, and the diagnosis, symptoms, and treatment of thoracic aneurism. We have thus presented to our view a comprehensive system of cardiac pathology, brought *au niveau* of the information of the present day, sedulously gleaned from the large harvest of matter scattered over many a field, where each discoverer, with a spirit of candour in the author which seems almost fastidious, receives his due share of credit, and where every part of the subject has been enriched by the practical results of his own extensive observation.

The subject of pericarditis, the first in order in the volume, possesses such universal interest, that we cannot forbear making a few selections. After distinguishing the various types of the disease, according as the deposits are healthy or unhealthy, into euplastic, cacoplastic, and aplastic, he proceeds to give a close account of the changes which the serous membrane undergoes in the acute and chronic forms of the disease. He then notices two varieties less familiar to practitioners, and

[a] Graves' Lectures, by Neligan, vol. ii. p. 152.

which we, on that account, select—the *tubercular* and the *hemorrhagic*. To Dr. Burrowes, he states, we owe the first accurate description of the former variety; but the knowledge of the fact is, as Mr. Ancell observes, at least as far back as the time of Dr. Baillie. The remarks of Dr. Bellingham are more brief than we could wish, but he has given most of the information which we possess upon this form. It is almost peculiar to early life, and is almost invariably found to exist with tubercles either of old or recent date in other organs. We have ourselves seen examples of this variety in children long kept in workhouses or like institutions of crowded resort, where so many agents co-operate in developing scrofula in the young. Dr. Bellingham makes a statement which appears to us incorrect:—

"That the 'exudation *always* consists of a considerable proportion of liquid analogous to that effused in other serous membranes as the result of inflammation in such constitutions.'"

Messrs. Rilliett and Barthez state that "the most frequent form was miliary tubercles seated under the *visceral* fold; they are for the most part very small, but occasionally, especially *when the pericardium does not adhere very firmly to the heart,* they attain a larger size, even that of an almond." We have the notes of a case before us which corroborate this: in a girl aged ten, the visceral subserous tissues were covered with tubercles, some distinct, some in patches the size of a sixpence, and close *adhesion* existed. The other serous membranes were healthy, but chains of white enlarged glands lay beneath the sternum, and semi-transparent tubercles existed in the right lung. The girl was in good condition, inclined to fat, but very pallid, and her appetite remained good nearly to the last. Dr. Bellingham does not try to decide the question whether the tubercles are to be regarded as the cause or the effect of the pericarditis: each opinion has been ably supported.

The second variety to which he alludes is the *hemorrhagic* form of pericarditis: of this he notices two kinds,—one, more commonly met with, which Rokitanski describes as the result of a secondary inflammatory process occurring in a plastic exudation; "the whole process bears throughout it the stamp of an inflammation which has not arrived at maturity, and its product is blood." We have seen examples of it in some malignant cases of scarlatina and small-pox. The other is of a scorbutic character, and has been termed by authors 'pericarditis scorbutica,' and is not uncommon in northern latitudes. In scurvy it is the most constant cause of a fatal result, as, out of sixty

subjects who died of scurvy, M. Karawagen found that thirty had this form of pericarditis. According to the statements of M. Kyber, an amount of effusion is reached in this variety, far beyond what we meet with in the ordinary cases of hydropericarditis; "the pericardium is enormously distended, often increasing a foot in length, and containing three to eight or even ten pounds of dark red fluid." The symptoms peculiar to this form, exhibit, as may be expected, total want of resistance in the system.

In the ordinary form of pericarditis, the author has classified the symptoms under three separate heads for convenience of description.

"1. The general or constitutional symptoms.

"2. The local symptoms.

"3. The physical signs.

"The most remarkable of the general symptoms which it will be necessary to notice individually are:—1. Inflammatory fever; 2. The condition of the pulse; 3. The expression of countenance; and 4. The position which the patient assumes in bed.

"The local symptoms from which most information is to be derived are:—1. Palpitation; 2. Pain; 3. Dyspnœa.

"The physical signs are those afforded by:—1. Inspection of the chest; 2. Palpation; 3. Percussion; 4. Auscultation."

Each of these he considers separately, and in estimating the comparative value of the local and constitutional signs, he observes that he lays greatest stress upon the four which follow:—

"1st. Palpitation, or any unusual action of the heart, arising *suddenly* in a patient who had not been previously the subject of it. If this occurs to a patient labouring under acute articular rheumatism, it is more certainly diagnostic.

"2nd. Any alteration in the pulse, such as its becoming suddenly quicker, slower, or intermittent.

"3rd. A more anxious expression of countenance than usual.

"4th. Pain, or any uneasy sensation referred to the precordial region; or if percussion or pressure at this part or in the epigastrium occasions pain.

"If with the foregoing symptoms any difference in the auscultatory signs is observed; if a friction sound, however slight, is heard, or the precordial region yield a more dull sound than natural, over an abnormal extent of surface, we need have little hesitation in pronouncing the disease to be inflammation of the pericardium."

In estimating comparatively the value of the two means of diagnosis, it cannot be too strongly enforced that a blind adherence to either of them, to the disregard of the other, is calculated to lead to unsafe practice. Every stethoscopist of

experience must admit, that the disease sometimes exists in so latent and masked a form as to take him by surprise, and that it would be a dangerous error to argue the absence of the disease from the absence of the physical signs. On the other hand, the diagnostic symptoms which were noticed above, even if all of them were present, afford only presumptive evidence. That any combination of symptoms would be insufficient for a positive diagnosis, is plain from the difficulty which existed of detecting this disease before the discovery of auscultation. Hence the importance, so forcibly inculcated by Dr. Stokes and other writers, of taking into account the circumstantial as well as the direct evidence—" utrumque per se indigens alterum alterius auxilio eget."

A short notice, which might be enlarged with advantage, is given by the author of " anomalous symptoms in pericarditis," such as are found in cases " where none of its ordinary signs existed, and where attention was withdrawn from the heart by urgent symptoms apparently belonging to disease of other organs or tissues." This disguised form sometimes takes the character of laryngitis; but it more frequently simulates cerebral or spinal disease, which sometimes, however, coexists with it, but in a minor degree.

" The profession," observes Dr. Bellingham, and we readily subscribe to his remark, " is principally indebted to Dr. Burrowes for information upon this head."

These cases, too frequently fatal, startle both the practitioner and the public mind by their rapid and fearful phenomena. Delirium, amounting in some cases to typhomania, generally exists, leading the physician to the firm belief that the sensorium is directly attacked, until the time for combating the disease with effect in its chief seat has gone past. Such a complication, however, is not altogether of recent discovery. We find cases testifying it, scattered through the older periodicals: among others, a case quoted from Haygarth by Dr. Davis, in a work published by him, and reviewed in the Edinburgh Journal for 1809, where delirium and somnolence occurring in a boy, aged seven, led the practitioner away from pericarditis, the real disease, to hydrocephalus, whose symptoms it had assumed.

Among the *symptomata rariora*, the author does not lay much stress upon dysphagia, which is noticed by Dr. Stokes in his work as of occasional occurrence. We have found this symptom alluded to by Morgagni, who was probably the first to perceive it, and the chief reason for which it deserves recollec-

tion is, that it may not lead the examiner away from the heart. Dr. Bellingham has omitted to notice Corvisart's observation of the sudden destruction of the eye, sometimes met with in acute pericarditis. So accurate an observer as Corvisart could hardly be mistaken as to the coexistence of these pathological changes in two important organs, but it has been questioned how far they stand to each other in the relation of cause and effect. Stokes doubts the connexion, because the lesion of the eye is met with in phlebitis and other typhoid inflammations, but it is not improbable that both may have been the effect of malignant irritative fever. Later observers have endeavoured to show a connexion between other diseases of the heart and changes in the eye.

The description of the physical signs, condensed by the author into about twenty pages, contains a fair account of most that is important to be known upon the subject. Our author thinks, contrary to Skoda, that the attrition sounds of pericarditis *can* be diagnosed from valvular aneurism, and that the distinctive characters of the two classes of sounds are well marked, and quite characteristic. The results of his experience he comprises in the eight following rules, which are so important that we give them at length :—

1. "Attrition sounds, as a general rule, give a sensation of friction or rubbing, and are usually rough, grating, or creaking, *never* blowing. Valvular murmurs, on the other hand, are usually blowing.

2. "Attrition sounds are usually double, and the second sound is loudest at the same part of the chest as the first. Valvular murmurs are usually single, and, when double, the point at which each is best marked is different.

3. "Attrition sounds are generally loudest over the middle of the sternum, or immediately below the nipple. Valvular murmurs are often loudest about or below the apex of the heart.

4. "Attrition sounds are not audible in the course of the large vessels which come off from the aorta, nor are they heard in general much beyond the precordial region, in both which situations valvular murmurs are frequently audible.

5. "Attrition sounds give the impression of being more superficial and near than valvular murmurs, and are often accompanied by a fremitus perceptible to the hand laid on the precordial region.

6. "Attrition sounds are sometimes audible only in the erect or sitting posture, or are developed or increased in intensity when the patient leans forward, or when pressure is made with the stethoscope. Valvular murmurs usually present the same characters in every position of the patient, and are not, unless in a few exceptional cases, influenced by pressure upon the precordial region.

7. "Attrition sounds are usually of short duration, vary in in-

tensity at the same part of the chest at short intervals, disappear under treatment, or subside altogether within a limited period. Valvular murmurs present the same characters at the same part of the chest for a lengthened period, do not disappear readily under treatment, and seldom subside altogether.

8. "Attrition sounds may obscure, but they do not interfere with the intrinsic sounds of the heart. Valvular murmurs either replace the normal sounds, or prevent them from being heard."

We may add to the above full account the influence of respiration in modifying both classes of sound, and which is justly considered as a sign of considerable value.

In his section upon the connexion of pericarditis with rheumatic fever, Dr. Bellingham traces the way in which it was gradually found out, and successfully combats the very unreasonable pretensions of modern French writers to priority of discovery. From the general ignorance which prevails in France of our medical literature, it is highly probable that M. Bouillaud believed himself the discoverer of this law of coincidence, and that our mercurial neighbours imagined that we borrowed it from him without acknowledgment. But chronological evidence is unanswerable against his claim, and all that we can assign to Bouillaud is the merit of drawing attention to the fact. Neither is the circumstance, which he believed also his own discovery, that "both endocarditis and pericarditis are not to be regarded as the mere result of metastasis, but as an integral part of acute rheumatism," due to him, for, so long ago as 1809, Sir D. Dundas, writing in the Medico-Chirurgical Transactions, expressly states that it usually *succeeds* rheumatic fever, but in one case was *coincident* with it. Bouillaud has justly stated "that the fibro-serous tissue of the heart is just as liable as similar tissues in the joints to be primarily or simultaneously attacked," and that, in a general disease like rheumatic fever, no necessary law of sequence can be traced between the joints and the pericardium. Facts prove that we may have pericarditis both when the affection of the joints is severe and when it is slight; and it would be a dangerous error to disregard the state of the heart because the inflammation of external parts is very intense; indeed, recent opinion leads to the belief that the cardiac complication depends much more on the intensity of the fever than the inflammation of the joints. Still, the disbelief which Dr. Walshe and other writers profess in the *possibility* of metastasis has been, there is little doubt, carried too far. Most physicians of experience have seen cases in which a sudden diminution of pain in the joints has been coincident with an equally sudden attack or aggravation of

the heart, and relief from the cardiac oppression has been felt in such cases by applying strong stimulation to those joints which the disease had abandoned. Our author, though believing metastasis a rare event, yet thinks that it does sometimes occur.

On the much litigated question, whether adhesion of the pericardium produces atrophy or hypertrophy of the heart, Dr. Bellingham pronounces a very decided opinion in favour of the former. In cases where the effused lymph forms a thick layer, he holds that a process of gradual contraction, just as takes place in burns, ensues, which compresses and withers the muscular tissue of the organ. The occasional presence of hypertrophy he accounts for by the coexistence of valvular or collateral disease, antagonizing the external compression caused by the pericardial adhesion. Objections may be readily suggested to this explanation, but the whole subject requires to be carefully re-examined, and decided by practical examples.

After a very lengthened examination of the different opinions upon the diagnosis of adherent pericardium, the author gives his own, having mentioned the causes which, in his opinion, have led writers of eminence to such a contrariety. Uncomplicated cases of obliteration of the pericardium can be, he thinks, always distinguished by the four following signs:—1. Absence of an impulse in the normal situation. 2. Presence of an impulse higher up than natural, and communicated by the body of the heart, and not its apex. 3. Clearness on percussion over the cartilage of the left fifth rib, and below over the usual site of the heart's apex. 4. An undulating movement in the epigastrium below the xiphoid cartilage. In complicated cases, where adhesion to the costal walls has occurred, he depends a good deal on persistence of dulness on percussion in the same place, unaffected by any change in the position of the body. In such cases Skoda's sign is generally met with, and, as has been shown in Cejka's cases, is sufficiently well marked to enable a careful observer to form a diagnosis. This is an intraction of the heart, so as to cause at each systole a depression of the intercostal space corresponding to the apex of the organ.

Upon the treatment of pericarditis, Dr. Bellingham gives a useful summary of our present knowledge. As this disease is usually posterior in time to the rheumatic fever, "coming on generally when the inflammation of the joints is at its height, or between the third and tenth day," he inquires whether we can *prevent* the cardiac complication by any specific method of treating rheumatism. As the general opinion inclines to the belief that the materies morbi is some poisonous matter of

an acid character, probably lactic acid, floating through the system, we should aim either at neutralizing or expelling it from the blood. He thinks that this is best accomplished by the free administration of alkalies and neutral salts, such especially as the salts of potash. Of these, the bicarbonate, as proposed by Dr. Garrod, is deserving of confidence. The above mode of treatment is useful as a preventive of heart disease; but when the heart is engaged, the author strongly deprecates trusting wholly to general measures. He gives two solid reasons why local interference is required when the heart is engaged, when it may not be called for in inflammation of the joints: one is, that the former involves life, which the latter does not; and secondly, that the inflammation of the pericardium does not, as in the joints, shift about, leaving no record of injury behind it, but adheres tenaciously to its hold by throwing out lymph, and thus damaging the organ irreparably. Hence he advises immediate and special attention to the heart itself, and the chief remedies which he approves of are local bleeding and mercury. He shares in the growing distrust of general bleeding, except in the case of robust persons, and at an early stage of the disease, so as to prevent exudation, if possible. It has been asked, what is the use of general bleeding after lymph has been effused, as it cannot promote its absorption? True, but where considerable fever exists, and the patient is able to bear depletion, a judicious removal of blood may at least prevent further exudation. Of course, in weak subjects it would be, as Dr. Stokes has observed, most injurious, hazarding the change of the dry form of exudation into the liquid variety. We recollect that the late Professor Lendrick, of this city, advocated opinions similar to those now held by the present physiological school of physicians upon the question of blood-letting; the same physician used also to deprecate leeching the joints in acute rheumatism as a measure calculated to develop pericarditis.

We have been occupied so long with inflammation of the pericardium, that we must pass over the consideration of the valvular and parietal diseases of the heart; not, however, without recording our opinion of the valuable information contained upon them in the volume before us. There is an interesting chapter upon the triple union of projecting eyes, enlarged thyroid, and palpitation of the heart,—a disease which is solely the fruit of modern discovery. The author endeavours to place these symptoms in a regular sequence, and the order which he proposes is—first, augmented action of the heart and pulsation of the cervical vessels, then, enlarged thyroid, and lastly, promi-

nent eyes: either of the two latter, however, may occur, without the presence of the other. In theorizing upon the cause of enlargement of the thyroid gland, he inclines to Dr. Parry's suggestion that this gland probably serves as a diverticulum to the cerebral circulation. It thus would appear to act as a safety-valve, increasing in bulk when the palpitation is violent, and diminishing when it becomes tranquil. Dr. Graves held an opinion somewhat analogous, that the thyroid body resembles in its functions erectile tissues, and that the suffocating sensations so disagreeably experienced in the throat by hysterical females probably depend on a temporary engorgement of this gland, causing mechanical pressure on the trachea.

Upon the enlargement of the eyeballs he offers some valid objections to both the usual explanations proposed: one, that it arises from protrusion by reason of abnormal deposit or pressure at the back of the orbit; the other, from actual enlargement of the globe itself. He thinks that Dalrymple's theory is the only one free from objection: that it depends upon absence of the proper tonicity of the muscles, by which the eyes are retained in their natural position in the orbits. As this, however, throws no light upon the *cause* of this loss of tone, Dr. Bellingham suggests that it is to be sought for in the compression of the nerves which supply the recti muscles with motor power. He considers how this compression is likely to occur. The third pair of nerves—which supplies three out of the four recti muscles, being in contact with the cavernous sinuses, and lying between the posterior cerebral and superior cerebellar arteries—is in a position where it can be readily compressed both by increased arterial action or impeded return of the blood by the veins. The effect of such compression would be to lessen the tonicity of the muscles which they supply, and, the globes of the eyes not being fully supported, protrusion would follow. Why this does not occur more frequently, arises, he thinks, from the thyroid body causing a diversion of the blood from the brain. As a proof of the probability of this explanation, he adduces the marked prominence and staring appearance of the eye which ensue upon the division of the internal rectus in strabismus, and the further increase of these defects by attempts to remedy them by the division of the external rectus muscle.

In the chapter on adventitious deposits in the arch of the aorta, the author alludes to the erroneous notions which exist about their cause, and shows that, so far from arising from inflammation, one of the forms most frequently met with, namely —atheroma, is a variety of fatty degeneration. He claims for himself the merit of being the first to explain the true symptoms

of disease of the arch of the aorta. The tendency of these deposits is to impair the elasticity of the vessel, and as it thus ceases to contract upon the blood which it contains, it would, after the systole of the heart, remain partially unfilled if the large vessels arising from it did not send back part of the blood in them to supply the deficiency. The results of this regurgitation are visible in the dilatation of the ascending aorta, especially at the sinuses of Valsalva. This dilatation was formerly attributed either to the increased force of propulsion from the heart, or from some impediment high up to the free transit of the blood. He admits that this theory may explain dilatation at the arch where the shock of the blood is felt, but does not account for dilatation at the cardiac end of the vessel. The latter, according to him, is caused by the distention from the regurgitated blood, which naturally takes effect in the most depending parts. As a proof of this he mentions the loss of the cylindrical form of the lower portion of the arch, which may be seen in some old persons in whom a projection towards the right side occurs.

As to the symptoms of this affection, they have been, he says, long before the profession, and subsequent experience has not shaken his faith in them. Of these he mentions four :— 1. Visible cervical pulsation. 2. Jerking pulse. 3. A double murmur audible over the first bone of the sternum; inaudible at the heart. 4. Impulse over the first bone of the sternum, if *dilatation* of the aorta has taken place. Upon the two last he lays particular stress.

The mechanism which produces these symptoms he explains as follows:—The first murmur is caused by the direct transit of the blood over the rough surface of the vessel; the second, by the regurgitation of the blood from the large vessels, and is heard during the diastole of the heart ; when the elasticity of the aorta is lost, but its surface remains smooth, sounds are heard in place of murmurs. The disease most likely to be confounded with it is patency of the aortic valves, but it can be distinguished from the latter by the duplicity of the murmur, by its situation, being loudest over the top of the sternum, and its want of propagation backwards to the heart. The prognosis of longevity in the two diseases is decidedly in favour of the arterial one.

We cannot touch upon the concluding chapter, on thoracic aneurism, further than to allude to the author's opinions upon the efficiency of a modification of Valsalva's treatment. He advocates a low form of diet, and especially a strict abstinence from fluids. The advantages of this diet, the particulars of

which he specifies, are to be seen in a diminution of the quantity of the blood, which does not thus dilate the sac or strike it with violence, and the thick consistence of it, which is favourable to deposits in the false variety of aneurism. Dr. Bellingham has comprised in twelve deductions his views upon the treatment of aneurism, about which he speaks in a more sanguine tone than most other writers.

In pronouncing our opinion upon the merits of the preceding work, we feel great pleasure in declaring our strong conviction that for extent and variety of information it is invaluable to every one who desires a full and accurate account of this important class of diseases. Dr. Bellingham carefully selected his materials both from his own experience and that of others. Of course, it must happen that when a large amount of selected matter from various authors has been directly introduced into the text, it must produce a diversity of style which impedes its easy flow. But we must remember that it is not every medical writer who can use the eloquent language of a Watson or a Graves, and that, in sacrificing to the graces of oratory, medical knowledge may be the victim. No one can rise from the perusal of Dr. Bellingham's work without deriving a large amount of profitable information; and we cannot refrain from offering our congratulations to the Dublin School of Medicine that another is added to the many valuable publications which it has put forth during the past few years. But, in offering this congratulation, and in expressing the above opinion as to the highly meritorious character of this book, a sad feeling comes over us, that the author can no longer read our praises or profit by them. His work, which we have so fully brought under the notice of our readers, was completed on his dying bed, amid the pain and suffering of a malignant disease, and he died before it was published. In him the Irish medical profession has lost one of its brightest ornaments, as his labours, which live after him, show; and we but echo the general feeling of sorrow at his premature removal from the field which he adorned by his talents, his modesty, and his patient research.

England and France before Sebastopol, looked at from a Medical Point of View. By Charles Bryce, M.D. London: Churchill, 1857. 8vo. pp. 124.

Relation Médico-Chirurgicale de la Campagne d'Orient du 34 Mars, 1854, *au 6 Juillet*, 1856. Par le Dr. G. Scrive, Médecin-Inspecteur du Service de Santé des Armées, &c., Paris: V. Masson, 1857. 8vo, pp. 485.

The two works now before us are of a most important character, in a national point of view, for they prove two facts: firstly, England's capabilities as a military power; and secondly, that this capability is wholly dependent on a liberal expenditure upon her troops, and a full and just attention to the means necessary for the preservation of their health in the unnatural position in which they are placed during the active operations of a campaign. One volume countersigns the statements of the other, and truth is imprinted on the pages of each.

Dr. Bryce's work consists of four chapters, comprising the following subjects:—

1. The sanitary state of the English and French camps.
2. The English and French hospitals on the Bosphorus.
3. The military effectiveness of the English and French armies at the close of the war.
4. An official report on the typhus fever of the French camp and hospitals.

These are four topics of interest to every inhabitant of the two countries.

To the Englishman they are satisfactory in the extreme, for they tell him that he need no longer remain under the impression that he is not one of a military nation (as he had been almost brought to believe), but the component part of a people that can meet the exigencies of war as thoroughly as they can, by their commercial power, supply the wants of peace.

To the Frenchman they are important (if not satisfactory), for they demonstrate to him this fact,—that in order to sustain the high military character which France has acquired in the eyes of the world, she must act with increased liberality towards her troops. The contrast in the condition of the two armies of England and France, at the commencement and close of the Crimean war, most remarkably illustrates the truth of this assertion; for the military effectiveness of the French, which in the beginning was the admiration of their allies, had passed away, and a deterioration followed, from causes which were entirely preventible, and depending solely upon deficiency of

supply. It is not enough (as a recent writer has shown) for any country "to start in war with a grand army, perfect in all its parts; but the wear and tear and daily waste must be supplied, or otherwise the whole will droop away and die;" and no fuller or fairer exposition of this fact can be given than by quoting from Dr. Bryce's volume the words of a French military staff officer on that subject, witness of, and sufferer from, the things which he describes:—

"You English," said he, "were abundantly provided and prepared against winter, the greatest enemy of armies in the field. You had clothing, huts, provisions, fuel in excess of all requirements, and close at hand. The French soldiers, on the contrary, were not hutted, whilst their tents were old and much worn, so that the rain passed through.

"There were no means of artificial warmth by day, and for night three blankets served two men for bed and covering. The soil within the tents was ankle-deep in mud and noxious filth. Hence, the night cold prevented sleep, although the tents were closed as tight as possible to retain the bodily warmth emitted by twelve or twenty men under one canvas; and hence again, the generation of a morbific atmosphere. As respects food, for months it was scanty and unwholesome, consisting of some English prepared meats, but chiefly of bad fresh meat, sausages, and salted lard; the last often so rancid as to be uneatable. The supply of wood for fuel was still more deficient, not a ration of it having been served out to the regiments on the plateau over Inkerman, although the men were frozen from cold. New clothing was not served out until March, 1856."

Herein lie the physical and moral conditions by which all exposed to their influence were predisposed to sickness. We have described to us abodes for the healthy, so vitiated as to have become prolific hotbeds of fevers, and—

"The receptacles allotted to the sick were, at this time, destitute alike of means and hope of cure,—nay worse, themselves charnel-houses, which had to be destroyed for the safety of the sick-attendants. The ambulance service had become the most dreaded source of dissemination of typhus through the French army.

"This state of things in the French camp and hospitals, at the very crisis of the war, was," Dr. Bryce observes, "little suspected by the allies in their close vicinity; quite unknown to the public press of Europe, and probably, equally so to the Cabinet representative of the Congress at Paris."

Of the correctness of this assertion, we can vouch so far, at least as regards the ignorance of the English as to the real state of things in the French camp and hospitals. The French

soldiers were certainly reported as being in the habit of visiting the English camp, and picking up portions of the rations not used by our own men, and it was stated that it was owing to deficiency in their own supplies; but this was barely credited at home,—and up to the last England lay under the impression that it was her soldiers alone who had largely suffered from the miseries of war. They had suffered, aye, more than suffered, they had died, from starvation and cold; but it was at a period of their occupation of the Crimea when time and circumstances prevented relief. Not so with France. She had no pretext whatever for the sacrifice of her soldiers' lives, for they died when there should have been abundance and plenty. We can refer it only to the absence of freedom of the press. This may be the excuse, for possibly none in France knew (not even the Emperor himself) the real state of the French army; the deterioration that had progressively gone on until its field efficiency had almost altogether passed away. Well was it for England that the pens of Russell and his brethren were kept moistened with the ink of honesty and truth, and the wants and deficiencies of our own soldiers written, not in an official communication, but in despatches addressed to the nation. Honesty is the best policy, and so it has proved. As Englishmen, they told to England the desperate position of our army. They said that we had commenced a war totally unprepared; that our whole system was defective; except in courage, and daring, there was a want of every requisite for war. They wrote what horrified "the Authorities," and made the old Peninsular gentlemen stand aghast. Where, *they* asked, was discipline now? Why did not Lord Raglan declare martial law, seize Russell and his friends, and send them home? What would the world say?—and soforth. These were the exclamations that found utterance "from old officers who knew best;" but, whose wishes for silence, if acted upon, would have blasted England's character for ever. Instead of the universal "rush to the rescue" that took place, and the outpouring of England's treasure for her sons, an inquiry would possibly have been made, to be followed by confirmation of the truth, accompanied by the pleasing intimation: that the army which had been there had been buried, and that the Allies were holding the position for us until a fresh force could be got ready and sent out.

No! England may thank Heaven that her constitution permitted a declaration of facts, as they actually were; and it is to be hoped that every future army will have its "Times Correspondent" "to take notes." We have heard objections made to the presence of the press in the field, on the head of the utter im-

possibility of strategical action being carried on when the possibility and probability of every future move are sent off, published, and made accessible to the enemy for his guidance. To this we most fully assent. Gentlemen connected with the press are naturally anxious to obtain for their respective journals the first and earliest intimation of all that is to be; and gentlemen of the staff may unintentionally make remarks, or suffer themselves to be "pumped," and information be thus conveyed that should never have been divulged, and therefore due caution should be used. The mention of the position of batteries and their strength, with military detail of any kind, from which the enemy can possibly derive advantage, should be most scrupulously avoided. Here, however, we come to another source to which we would wish our remarks to apply: we mean the journals themselves. They are the parties to blame for any inadvertence of this kind, and good sense should induce them to suppress the publication of every word that can benefit our foes in any way.

We are aware that in the last war facts were made known by the journals in their indiscriminate haste, from which our troops subsequently suffered, and many a life was taken in the Crimea in consequence of information thus communicated to the enemy. We are advocates for freedom of the press,—its use, but not abuse.

We have been led away from the consideration of Dr. Bryce's book because we could not avoid offering these remarks, and we trust our readers will concur with us in their correctness and suitability in connexion with the subject under consideration.

It may be supposed that Dr. Bryce, as an Englishman, has been partial to his own countrymen in his writings; but whoever will read his work carefully will see that facts are given in a fairness and simplicity of style which must exculpate him from any such charge. He has placed before the world the condition of the two great European armies as existing under similar circumstances in war, and he has given the consequences and results to each. He has placed the state of the two armies in the field in juxtaposition, and he has contrasted the condition of their sick and hospital arrangements, and it is impossible for any one to read the chapters on the "French and English Hospitals on the Bosphorus" without feeling proud of the superiority of the latter.

Dr. Bryce offers a detailed view of some of the principal receptacles for the sick of the French army; and the condition of these in the spring of 1856 contrasts strongly with those of the

English force at the same period. He describes the Hôpital de Pera, with accommodation for 2400 sick; the Hôpital de Dohua-Batchi, for 1000 patients; the Hôpital de Gulhanéh, opened with 1800 beds in thirty wooden sheds, and with twenty other sheds in course of construction; the Hôpital de l'École Militaire, with 1100 beds, and some others; and gives a melancholy picture of the condition of each, with its daily mortality from the malignity of the fevers generated and kept up by over-crowding, want of cleanliness, and deficiency of medical attendance,—the number of surgeons doing duty in the hospitals, instead of being increased to meet the emergency of the time, not amounting to half of the regulation strength, and those even of inferior military grade. Surgeons, priests, and sisters of charity, were dying rapidly of the pestilential fever, whilst "scores of orderlies" were contracting the disease. And how could it be otherwise—

"When the same mattresses and blankets were being used for a succession of sick, and without regard to the cause which vacated the beds, whether recovery or death—the beds, in fact, being never empty, day or night. The healing art of the physician was humiliated in the business of personal conditions beyond his power of controlling, whilst one hundred and fifty-four patients, at the Hôpital de Pera, were the fewest under one surgeon, and he only so intrusted from necessity. On the whole, it never before happened to the writer to witness hospitals in a like pitiful condition, no less than thirty-five medical officers and five priests being the proportion of seventy-three patients who were in the officers' hospital on the 3rd of March: of these, two army surgeons died that day, and three more were carried to the same cemetery on another day."

After reading these melancholy details of the horrors of war, it is pleasing to accompany Dr. Bryce to the English military hospitals at the same period. Referring to them (after closing his history of the French), he says:—

"It is now happily in my power to relieve the painful impression which the perusal of these statements must have caused, by presenting a very different picture, which was to be seen at the same time on the opposite shore of the Bosphorus. I can testify to the thorough efficiency of these establishments. All essential requisites for the successful treatment of patients—surgical skill, suitable diet, personal comfort, order, cleanliness, and space—existed in abundance, and were administered with a liberality which satisfied the most exacting observers, that whatever science, humanity, and affluence could do for the welfare of the sick and wounded English soldiers, was at his command. The number of medical staff appointed to the hospitals allowed to every patient the leisurely examination of his case, and well-consi-

dered prescribing,—not questioning, examining, and prescribing at the rate of two patients per minute, as I have seen done at the Hôpital de Pera upon two hundred cases of dangerous disease. The wards were furnished with every requisite, and fowl, fish, the best of soups, eggs, milk, Wenham-lake ice, champagne, claret, fruits,—indeed every luxury that could be afforded in high life at home,—were dispensed medicinally to the soldiers. Beds and bedding were so abundant that a soiled sheet was never seen at morning inspection."

The facts here stated illustrate, by contrast, the conditions of the French and English military hospitals on the Bosphorus at the close of the war.

One of the earliest remarks in Dr. Bryce's work comprises the following words:—

"The war in the Crimea offered a field alike vast and instructive for the observation of the conditions which materially affect the sanitary state of armies, and, consequently, their belligerent powers, and every soldier admits that the destiny of the enterprise, in a military sense, depended mainly on the health of the troops engaged."

We do not think it possible for a more complete confirmation of the author's views upon this subject to have taken place than that which the sequel of the comparison exhibited. The conditions which affected the sanitary state of our army at the commencement, were soon made manifest, and the result disclosed. We suffered from the effects of a long-continued peace—war was thought impossible, and our naval and military establishments were barely tolerated. We therefore commenced the campaign at a very great disadvantage:—

"The expedition, to the majority of the French troops, on the contrary, was merely a change of country from Algeria to the Crimea, whither they transported their customary fighting weapons, habits, and provisions, for the conduct of the war; and hence their comparative exemption, at the commencement of the campaign, from many of the evils and hardships endured by the English troops. This was throughout Europe believed to be the condition of the superior military system of France."

But the sequel proved the reverse. The French had this superiority, namely, a more thoroughly trained staff of military officers, and, in imitation of their schools of instruction, the new Staff College is to be established at Sandhurst, our former source of instruction being, practically speaking, an imposition. It was such in two ways. Firstly, it was an imposition upon the country in causing it to suppose that an efficient training school for the army was in existence; and secondly, it was an

imposition on those officers who, in the hope of staff employment, devoted themselves to study in the senior department, for they were not afterwards so employed—nepotism and connexion alone securing admission to its ranks. We should like to see a return moved for in the House of Commons of the names of all general officers who, from 1815 to 1855, have held commands at home and abroad, with the names of their respective staffs, specifying the degree of relationship by blood, or other connexion existing between each. We believe that it would be a document that would for ever condemn our hitherto staff military system, as one conducted solely with a view to private ends, and not to the public good. As to our officers, regimentally considered, we believe that they cannot be excelled,—for faithful discharge of duty, interest in the welfare of their men, and individual gallantry, they are models for any army in the world. It is our system generally that has been at fault, and such the work of Dr. Bryce fully proves. We might quote page after page of this book, but it would only be to the end of coinciding with the opinions therein expressed. The author has written what he saw, and he has done good service to his country by so doing.

From Dr. Bryce's work we turn to that of Dr. Scrive, who has written in frank honesty, and laid before the world the condition of the French army in all its bearings. France is a great country, and the French people a great nation; and if England can afford to tell to the world when and how her troops suffered under the varied circumstances of war, France may equally confess to the losses she sustained. There is nothing lost by such an act,—all but respect and honour her the more. The days of humbug are rapidly coming to a close, and nothing now but sterlingness of character will carry individuals or nations permanently through. We hail, therefore, with pleasure Dr. Scrive's manly work. We do not read its pages with any feeling of satisfaction at finding that the miseries of the French soldiers were equal to those experienced by our own,—this would be a sad, a despicable feeling, and one unworthy of our country ; but we read them with satisfaction as strengthening the position which we have ever advanced and entertained—namely, that mortality in war is not depending upon the exertions of the enemy, but upon the provisions made for the feeding, clothing, and preservation of the health of troops. Dr. Scrive shows that, towards the commencement of the second winter in the Crimea, the French army began to suffer severely, both as regards the number of men

taken ill and the class of cases which came under treatment; and that this state of things gradually increased until, of 309,268 officers, sous-officiers, and soldiers, embarked from France for Turkey and the Crimea, no less than 200,000 had entered the ambulances, of whom very many died.

The computation of sickness at the commencement of the war, both by French and English, was the same, viz., 10 per cent.; thus, for 40,000 men the provision made was for 4000 sick and wounded, and each "ambulance" seems to have been fully and most efficiently furnished with bedding and stores of all kinds, and arranged to be carried upon mules. The class of cases of illness from which the French soldiers suffered varied, as might be anticipated, according to the situation in, and service on, which they were placed. Thus, at Gallipoli the prominent diseases were fever, especially of the intermittent type, inflammatory sore throat, and acute bronchitic attacks. At Varna they suffered principally from cholera, and the force which was despatched to the Dobrudscha was almost annihilated by this disease.

Dr. Scrive then carries the reader to the Crimea, and places before him in consecutive periods the state of the French army in its sanitary point of view; and now it is that we see the gradual decay of that fine army which France sent out to the defence of Turkey. The report is given in the form of monthly returns, with annotations, and a reference to these will show the progress of the sickness at each period of the year.

In November, 1854, the effective soldiers of the French army in the Crimea amounted to 56,237 men, and their entries into hospital 5432, chiefly from chronic diarrhœa; whilst the old soldiers began to exhibit symptoms of scurvy, such as swelling of the gums, and petechial spots upon the skin.

In December, the effectives increased in strength to 65,179, and the sick and wounded in hospital to 6348; of whom the following summary may be made, as showing the proportionate numbers of the several diseases prevalent in the French camp at a period when our troops were so lamentably suffering, and when the popular belief was that our Allies were free from disease. In December, 1854, the number of wounded in the French hospitals amounted to 550: frost-bitten cases, to 500; cholera cases, to 352; scurvy, to 100; typhus fevers, to 86; and other fevers and diseases, to no less than 4760: or a total of the numbers specified to 6348.

In January, 1855, the effective strength was 78,502; the sick, 9092. Dreadful weather now ensued for several days in succession, the cold being intense; and no less than 2500 were

taken into the ambulances, whilst many were frozen, and the ambulances became unhealthy from the numbers of sick crowded into them, and typhus began to show itself.

In February, the effective strength was 89,309, and the sick 8194. Scurvy was now the principal affection, there being, at the end of this month, 3000 men in hospital with it. The most serious cases exhibited effusion of blood, with swelling of the limbs and diarrhœa. The wounded now began to be unhealthy. In March an improvement took place; the effective strength had increased to 96,258, whilst the number of sick had declined to 7585.

In April there was a further improvement still, 5600 being the return of sick. In May, the French position was extended to the Tchernaya heights, and the state of the army was the following :—The effective strength was 107,760, and the entries into hospital, 7,350. Many cases of cholera and dysentery now appeared.

In June, the French army mustered 121,887 effective men; and, as active operations had commenced, their proportion of casualties was great. The numbers admitted into hospital were 21,449 ; but of these 6000 were wounded, and 4500 were cholera cases, very many of whom died. Scurvy also re-appeared, in consequence of the extreme dryness of the soil having deprived the French army of the dandelion to which, in the form of salad, they almost entirely trusted as an antiscorbutic.

In July, the effectives were 118,655, and the entries into hospital were 14,987. In August the effectives mustered 119,251, and the entries into hospital were 15,874. In September the effectives increased to 125,680, and the entries into hospital were 14,447 ; of whom 8665 were wounded, no less than 5000 having been wounded on the 8th of September alone. The medical officers were at this time working in the hospitals on an average of ten hours daily.

In October the effective force amounted to 138,532, and the entries into hospital only to 7955, the weather being beautifully fine, and few cases of cholera occurring. Dr. Scrive, however, expressed his fears that this state of things would not last long, in consequence of the extended position held by the army, and the distance of the troops from wood and water, coupled with the used-up constitutions of the old soldiers, and the weakness remarkable in the recruits. In November the army mustered 143,250 effectives, and the entries into hospital were 8600. Winter now began to show itself. In December the strength of the army was about the same, or 145,000 men. It was now that disease began to make its inroads, in conse-

quence of the bad manner in which the army was supplied, and the filthy condition of the camp, both acting on constitutions already undermined. The tents, from long use, were not capable of keeping the men protected from the weather, whilst the huts constructed of clay and stones were small, damp, and badly ventilated; and typhus soon appeared, and ran ahead:—

In December the cases of this disease were	734
In January they amounted to	1523
In February to	3402
In March to	3457
Making a total of typhus cases alone of	9116

Whilst an immense number suffered from scurvy, hundreds coming in stricken down with this disease; and no less than 48,000 sick filled the hospitals and ambulances during those four months. In fact, as Dr. Scrive describes it[a], "they were completely debordés"—done up; scurvy, fevers, diarrhœa, all turning into typhus; and the misery and wretchedness of the place were complete. Medicine was of no avail. The cattle even, Dr. Scrive asserts[b], were typhus-stricken, so that several sheep died of the disease. In twenty-two months no less than 114,668 sick and wounded left the Crimea from the French army for the hospitals at Constantinople; and the influence of disease in reducing the efficiency of an army cannot be better illustrated than by the recital here given by Dr. Scrive of the condition of the French army in the Crimea, during its sojourn there. That the French army had a large extent of ground to hold during the second winter, far in excess of that occupied by the English, there is no doubt; but this should not have prevented them from making suitable provision for their troops. It was no reason for retaining men in old and worn-out tents, or not affording a sufficiency of good food, clothing, and fuel, to enable them to withstand the inclemency of the weather. They had the experience of a former winter, they knew what they must expect, and they did not make provision against it. Had they done so, we feel satisfied that typhus fever and scurvy would no more have visited their camps than it did the English, and we are assured that had the same site been held by the English, during the winter of 1855 and 1856, they would have had every requisite for their soldiers' healthful and comfortable condition. We feel for every gallant Frenchman who thus sank silently into the grave; we feel for those who, in "belle France," waited,

[a] Page 275. [b] Page 299.

but in vain, for his return. There may be some, though sad, consolation, in the idea of a father, son, or husband, shot down or bayoneted in the glorious struggle for the mastery in battle; but there is nothing to compensate the feeling of anguish that must follow the sad announcement of a brave man dying under the influences of starvation and want. Let France and England read and ponder over the two works of Dr. Bryce and M. Scrive, and let them do their duty to the men whom they expect to do theirs. To Dr. Scrive our best thanks, as a people, are due, for laying before us facts that prove the necessity for a liberal support being given to our military establishments. Of his writing we can only say that it is open and candid, and his recommendations for the good of the French army are such as must commend him to the good opinion of the French people as an officer of high and enlightened mind, and of estimable character. We can recommend the study of Dr. Scrive's work to our readers.

Contributions to the Physiology and Pathology of the Circulation of the Blood. By GEORGE ROBINSON, M.D., &c. London: Longmans. 1857. 8vo, pp. 273.

IN the present age, so remarkably characterized by the rapid strides with which every branch of science appears to be hurrying onward toward a higher degree of perfection, the task of "reading up" with a view of keeping pace with the improved state of knowledge, even in a single department, has become a matter of such serious labour as to require not only a very considerable amount of patient research, but also much diligent application, and an abundance of leisure time to bestow upon the pursuit and acquisition of new information. Most of those who are engaged in the busy occupation of practice, or the no less anxious and responsible duty of teaching, must have had experience of this inconvenience, so inseparably connected with the proverbially endless making of books. Indeed, it would almost appear that the healthy literary demand is hardly commensurate with the very rapid rate at which the prolific press of our day persists in pouring forth its supplies of new works. Be this as it may, however, we suspect that not a few of those who read these reflections will be disposed to maintain that, in the good old time when men were wont to rush less hastily into print, the real requirements of the period were not so imperfectly met as might now be supposed. At that time, should a man be so fortunate as to arrive at the dis-

covery of some new principle in science, he endeavoured to ascertain, by duly testing and carefully reviewing his discovery, whether its truth, usefulness, or practical applicability was such as to merit and meet with a timely recognition, and then he was satisfied to announce the result in a modest monograph or a plain and pithy pamphlet. Then, indeed, could one with a fair approximation to accuracy almost estimate the value of a book by its bulk. Devoutly have we often wished that such times would once more return, or rather, that the good old practice had never yielded place to the modern movement in favour of bulky and ponderous treatises upon slender, perhaps "seedy" subjects. How often, in perusing a modern work, and in endeavouring to arrive at the discovery of one fresh and fulgent idea, must we submit to wade through a lengthy mass of mere filling-stuff, in which, however, the well-read inquirer is disposed to take as little interest as does the anatomist in the depths of adipose substance through which he cuts his way in search of some vascular branch or nervous twig! We confess that, upon the first hasty glance over the pages of the work at present under consideration, we felt but little inclined to assign it a place among the more valuable scientific contributions of the day; however, a more careful scrutiny of its contents has resulted—first, in modifying, finally, in reversing, our judgment in the matter, as we shall endeavour to show as we proceed.

The greater part of the work is made up of papers which had been previously published by the author in the different periodicals at various intervals during the last fifteen years; and the fact that these essays are now merely reprinted rather than re-arranged, although tending at first to impress us with an unfavourable opinion of the book, is in reality calculated by no means to detract from their value, inasmuch as it conduces to establish and define the successive steps of discovery at the several periods indicated by the dates prefixed to the papers respectively. It appears to us, therefore, that one at least of the objects which the author has had in view in adopting the present arrangement of the work, in preference to a more elaborately systematic procedure, is, to claim for himself the priority of discovery regarding several points in physiology and pathology which have long since succeeded in obtaining a general recognition and assent. Another object of the author evidently is, to insist upon a more philosophical mode of investigating what we may call the pure *mechanism* or *physics* of function.

The great discoverer of the circulation of the blood, in the

sixteenth book of his treatise "De Cordis et Sanguinis Motu," has the following suggestive passage:—

"Finally, reflecting on every part of medicine, physiology, pathology, semeiotics, therapeutics, when I see how many questions can be answered, how many doubts resolved, how much obscurity illustrated, by the truth we have declared, the light we have made to shine, I see a field of such vast extent, in which I might proceed so far and expatiate so widely, that this my tractate would not only swell out into a volume, which was beyond my purpose, but my whole life, perchance, would not suffice for its completion."

Thus wrote the immortal Harvey in 1648; and, about a century later, we find Dr. Richard Davies, in his "Epistle to the Rev. Dr. Hales, introductory to an Essay on the Blood," further stating:—

"It must be confessed that the discovery of the circulation has not been followed by so great an advancement in the science of medicine as was naturally to have been expected from it. The reason of which is, that our theory has not yet advanced much in the knowledge which is naturally founded upon this grand principle—the *circulation.* It has not yet explained the epicycles, as I may be allowed to call the partial systems, and various relations of parts, both solid and fluid, on which the anomalies of the body, the nature of diseases, and the operation of medicines, must depend. Had Newton only discovered the general operation of gravity upon all matters, and barely hinted that the motion of the planets must depend upon it, philosophers had then understood the system of the world nearly as well as we do now the system of the body."

The present author, strongly convinced of the truthfulness and force of the opinions expressed in the passages we have just quoted, was led, many years since—

"To engage in an attempt to elucidate some points in the physiology of the circulation of the blood, and to apply that great principle more extensively to the illustration and explanation of pathological phenomena. For," he continues, in his introductory remarks, "since all experience shows us that the *incessant* and *regular motion* of the blood is, in the human body, the source and supporter of those secondary functions which collectively constitute animal life, it seems but natural to seek in its irregularities and disorders for a key to many of the morbid actions which have hitherto remained inexplicable."

The first paper in the book is devoted to an exposition of the author's views regarding the peculiarities in the composi-

tion of the urine secreted in the different stages of granular (Bright's) disease of the kidney, comprising its albuminous impregnation and its diminished density. Dr. Robinson, in rejecting altogether as untenable the hypothesis that albuminuria is due to a peculiar irritation of the kidney, adduces the fact of the proportion of albumen in the secretion being often diminished in the advanced stages of granular disease, at a time when the supposed irritability of the organ should be at a maximum. The absence, therefore, of a fixed relation between the proportion of albumen in the urine, and the quantity of granular matter in the renal substance, he considers to be fatal to this theory. We shall not dwell upon an examination of the various other hypotheses which have been advanced to account for this anomaly in the renal secretion, but shall merely remark that the explanation of the phenomenon, as suggested by the simple and carefully contrived experiments detailed in the work of Dr. Robinson, was not only fully made out, but clearly adapted and applied, first by himself, in this paper, which was published in 1842, having been but partially and imperfectly anticipated by other writers and observers. Several very important and interesting facts are here brought forward, with a view of establishing the *principle* that *albuminous effusion* is the invariable consequence of a congested or distended state of the capillaries of the part; and further, that in a healthy condition of the blood the *proportion* of albumen in the effused fluid may be considered as commensurate with the *degree* of that congestion, from whatever cause arising.

The next paper contains a detailed account of a series of experimental researches into the connexion existing between an unnatural degree of compression of the blood contained in the renal vessels, and the presence of certain abnormal matters in the urine. The general effects produced in the several experiments are pretty much alike in all; however, the latter have been arranged under two divisions.

The first of these contains twenty experiments, in all of which some artificial impediment obstructed the flow of blood through the vein. In the second are detailed fourteen experiments, in which an increased determination of blood was directed to one or both kidneys, without any artificial obstacle being opposed to its free return.

The results to which Dr. Robinson has been led by these experiments may be well indicated by the following corroborative testimony of Professor Frerichs ("Die Bright'sche Nierenkrankheit:" Brunswick, 1851) who "repeated them on different animals, with precisely similar results. He also examined

the urine microscopically, and found it to exhibit the fibrinous casts of the tubuli uriniferi and the copious epithelial cells so often noticed in Bright's disease of the kidney, thus furnishing additional evidence of the influence of renal congestion in producing many of the most characteristic phenomena of that disease." This observer states conclusively:—"It is, therefore, no longer doubtful that the *obstruction* of the current of *venous* blood in the kidneys produces, as a consequence, the passage of albumen, fibrine, and finally, also of blood itself, into the urinary passages." He also confirms the experiments of the author as to the similar changes in the composition of the urine effected by an increased determination of blood to the renal artery:—"By tying the aorta, and, at the same time, destroying a kidney, a constant transmission of considerable quantities of albumen into the urine is produced."

After a short, but ingenious paper, on the mechanism of absorption, we come to a very interesting essay on certain points in the mechanism and physiology of the circulation of the blood. Regarding the forces which produce the passage of fluids into and out of the blood-vessels, and the laws regulating those forces, we quite agree with Dr. Robinson that there is much still to be learned. To the explanation advanced by Magendie and others of the French school, viz., that all those functions are "referrible to the power of capillarity inherent in the porous coats of the vessels, and are thus analogous to the phenomena of endosmosis and exosmosis"—the author opposes the following arguments:—First, this doctrine is based on experiments with stagnant fluids, subjected to equal pressure, and, therefore, not in a condition analogous to that of the living stream within the vessels, or of fluids situated on the outer surface of their minute branches. Secondly, the preponderance of one or other action in particular organs is not explained by this hypothesis. Thirdly, the viscidity and cohesiveness, which impede the blood's passage through very small vessels, must oppose more resistance to that minute separation of its particles which is necessary for the effusion of albumen through the invisible pores of membrane.

Concerning the uses served in the animal economy by the various impediments which the blood encounters during its passage from the ventricles till it arrives at the veins, the general conclusions at which the author has arrived are thus summed up:—

1. That the obstacles to the free passage of the arterial blood prevent the small arteries from discharging into the veins more than a limited quantity of blood in a given time.

2. That as the blood encounters fewer impediments in flowing into, than in escaping from, the arterial system, its rate of influx has a constant tendency to preponderate over its rate of efflux into the veins. 3. That the amount of this disproportion is ever varying, and that the evils which a great excess would occasion are, probably, in some measure obviated by the circumstance of the opposition to the influx of blood into the arterial system increasing in a direct ratio to the amount of disproportion between it and the rate of the efflux of blood into the veins. 4. That the whole mass of blood contained in the arterial system, from the heart to the most contracted portion of the capillaries, exerts a lateral pressure, the degree of which is altogether dependent upon the relative facilities afforded to the entrance of blood into, and its discharge from, that system of vessels. 5. That the lateral pressure of blood contained within the arteries is probably equal to its onward pressure, so that the arterial blood will press equally in all directions. 6. That this lateral pressure of the arterial blood is the force which maintains the large arteries in a state of distention, and thus enables their elastic walls so to react upon their contents as to be the means of accomplishing various useful purposes in the animal economy. 7. That the same force, acting on the interior of the minute porous arteries, causes that slight but constant exudation of certain portions of the blood, which is indispensable to the performance of the important functions of secretion and nutrition. 8. That the blood contained in the commencement of the capillaries, being subservient to the same uses, is also made to exercise some lateral pressure, the degree of which varies in different situations, but is probably never quite equal to that of the onward impulse of the same column of blood. Finally, that as those impediments which limit the rate of the discharge of blood from the arterial system constitute the first and essential cause of all the subsequent phenomena, so the uses served in the body by the existence of these peculiar physical effects are, with them, clearly referrible to the same apparent imperfection in the mechanism of the circulation.

In the next part of this paper the author has endeavoured to trace the mechanism of absorption to the peculiar physical conditions which regulate the passage of the blood into and out of the veins. To enter upon the facts and experiments detailed in this portion of the work, it were necessary to have recourse to diagrams; we shall, therefore, refer our readers to the book itself, where they will find some beautiful and happily contrived devices for illustrating the mechanical views therein

advanced. We shall merely give in general terms the author's abstract of these views:—

"Effusion," he says, "is promoted—1st, *directly*, by whatever increases the amount of pressure acting on the *internal* surface of the blood-vessels; and 2ndly, *indirectly*, by whatever *diminishes* the pressure acting on their *exterior;* while absorption is rendered more active—1st, by whatever *directly increases* the amount of *external* pressure; and 2ndly, by whatever increases the rapidity of the currents of blood; and thus diminishes the pressure acting on the *internal* surface of the absorbing blood-vessels."

We cannot afford room to indulge in a further sufficiently detailed notice of the many interesting topics contained in this work; suffice it to say, that the remaining papers are pervaded by the same philosophical spirit which may be recognised in those whose substance we have thus imperfectly endeavoured to condense.

It is too much the practice in late times to view facts and observations alone as objects of science, and in no department is this more applicable than in that of physiology. We have no lack of observers; they are to be found everywhere. The accumulated experience of the normal and abnormal phenomena of life—phenomena which are registered with an accuracy and minuteness scarcely accorded to other sciences, has attained a growth so ponderous as almost to overburden the minds of more ordinary observers, while to the many revelations regarding the varieties of structural arrangement, the microscope has been recently adding its contributions to a subject already sufficiently complicated and abstruse. And yet, how few general laws, how few adaptations of structure to function, have been discovered; how little do we know of the mere mechanical arrangements of animal life! Refreshing, therefore, is it to meet now and again with a work like that before us, breathing, as it does, a true spirit of calm philosophy, worthy of a follower of Harvey. Among its pages is a paper from the pen of the late Dr. Marshall Hall, who comes forward to award to the author that priority of discovery to which we alluded in a former page. A physiologist of the late Dr. Marshall Hall's eminence could afford to allow the claims which Dr. Robinson has put forward, the claims of a fellow-labourer in the right field of research. Physiology, we trust, is about to be studied under a new aspect; we are too much disposed to attribute to a mysterious and undefined vitality a position and an efficiency which are hardly legitimate, and surely the important discoveries of the last century should prove to us that *sub-*

ordinate results must not be ascribed to such a presiding power in the phenomena of life. We find certain chemical principles, with affinities whose potency must contribute to definite results; also several mechanical arrangements, the play of which must account for more of these phenomena; while, regarding the nervo-electric structure, complicated and obscure though it be, this very complexity might serve to show that upon this structure, and the function which it subserves, depends much of the physics of life. When we have given these their due weight, when we have worked out the problem of the efficacy of these forces and mechanisms, there will yet be phenomena of a higher order and a more subtle nature, which we may then ascribe to vitality, for, by referring to this agency all unknown causes, the mind is led, in fact, to rest upon a mere verbal quibble, a "nescio quid," which is by no means conducive to the healthy advancement of philosophical knowledge.

De la Saignée dans la Grossesse, Études Pratiques sur la valeur des Émissions Sanguines et sur leur application aux divers Ordres d'Accidents Pathologiques, qui peuvent affecter les Femmes Enceintes. Par le Dr. P. Silbert (d'Aix). Deuxième Edition. Paris: Victor Masson. 1857. 8vo. pp. 224.

The opinion of the profession as to blood-letting in pregnancy, either as a preventive or a remedy, has undergone remarkable oscillations, ranging from one extreme to the other; and this quite independent of considerations touching changes in the type of disease, or theoretical views as to the nature of inflammation. Considering the question as one of some importance, the French Imperial Academy of Medicine proposed this subject for the "Capuron Prize" of the year 1856, and the successful competitor was Dr. Silbert. The present volume is the second edition, augmented and corrected. If an essay on such a subject were desirable, probably no better could be written; although, if we were disposed to be critical, there is, perhaps, too much of the "juste milieu" system about it.

After a brief introduction, the first part of the work is occupied with the history of blood-letting in pregnancy,—of which it is enough to say, that Hippocrates and his disciples proscribed bleeding, from the belief that the increase of the blood, resulting from the suppression of menstruation, was barely sufficient to nourish the infant, and that the further advanced the pregnancy was, the more danger of abortion; and, consequently, that to diminish the quantity of blood still further must necessarily

be mischievous. Galen, and Paul of Egina, maintained the same opinion; but Celsus seems to have had a glimpse of the truth when he stated that the propriety of bleeding depended neither upon the age nor frequency, but upon the strength of the patient. On the other hand, Rhazes, Haly-Abbas, Rhodion, Fernel, &c., not only admitted blood-letting, at least in the mid-period of pregnancy, but maintained that abortion would otherwise probably result. By-and-by nicer distinctions were drawn: Mad. Louise Bourgeois and Guillemeau admitted the propriety of blood-letting in plethoric women, but not in those of a feebler constitution. The indications laid down by Mauriceau were—cough, especially when accompanied by spitting of blood, painful hemorrhoids, hemorrhages, and convulsions; and these states were regarded as calling for the remedy by his successors for many years. Boerhaave widened the list somewhat, and included most of the disorders of pregnancy, but the remedy was the same, because, like his predecessors, he regarded the suppression of menstruation as the one cause of all the mischief.

The third historic period, according to Dr. Silbert, extends from Chambon (1798) to Andral; and in the earlier portion the practice was governed by the prevailing theory which attributed nearly all the pathological conditions of pregnancy to plethora. Chaussier, however, made a step in advance, by pointing out the serous character of the plethora. Lachappelle and Dugés attributed the febrile, or supposed febrile, condition of pregnant women to the condition of the blood, with which the late Dr. Burns agreed. With all those who held these doctrines, it followed that the remedy was loss of blood; but it is worth while for us to remember, that almost all the theories were based upon assumptions which more enlightened and careful investigation has disproved.

The researches of MM. Andral and Gavarret upon the blood have afforded new data, and it is now to be seen how far the conclusions of Caseaux and others will bear the test of practical experience. This brings us to the second or important part of Dr. Silbert's work, which is occupied in the consideration, first, of pregnancy, as to the indication or counter-indication of blood-letting; and second, blood-letting, as to its administration during pregnancy. He begins by establishing the fact that pregnancy, though a peculiar condition, is a physiological one: yet it may excite diseased action, or the woman may be attacked by disease when pregnant; or, lastly, may conceive whilst the subject of chronic disease. Under either circumstance are we to reject blood-letting altogether, or to regard it as the remedy *par excellence?* The author points out that blood-letting di-

minishes the quantity of the circulating fluid, and alters its character, and that, therefore, it is exactly suited to cases of plethora, or to those in which we wish to diminish *la force plastique et cicatrice* of the blood; in short, that it is a most valuable revulsive in most diseases of pregnancy, and not only so, but may advantageously be used as a prophylactic. Admitting all this, the next question is—What is the influence which pregnancy exerts upon the economy? Is its condition sthenic or asthenic? Grisolle considers gestation a debilitating cause, and upon this view M. Beau has based his theory; but we are inclined rather to agree with the author, that no positive and absolute rule can be laid down,—the pregnancy of one woman differing widely from that of another; or, if we must have a general rule, it may, perhaps, be expressed in the very high-sounding, mysterious formula of M. Chailly-Honorè:—"Chez les plupart, la grossesse joue la role d'une multiplicateur pathogenique, et les dispositions pathologiques s'accentuant davantage, l'elevanlement produit par la grossesse devient le signal de nouveaux disordres."

In chapter IV. the author enters minutely into the modifications, anatomical, and functional, and sympathetic, produced by pregnancy, and then considers them as to their being indications for blood-letting. The excitement of the nervous system he does not consider as an absolute counter-indication, but only as indicating great caution, especially towards the end of gestation. The bearing of the modifications undergone by the blood is a more difficult question. These changes are thus stated by the author:—1. The blood globules diminish from the commencement of pregnancy to the end, but more rapidly towards the termination. 2. The fibrine, on the contrary, slightly diminished during the first months, is increased slightly up to the seventh month, and very largely afterwards. 3. The albumen diminishes progressively, though not notably, from the beginning to the end of pregnancy. This condition of the blood M. Beau regards as depending upon defective digestion, and proposes to term it *Dyspepsie latente;* but facts are scarcely reconcilable with his theory. The analogy between the condition of chloro-anemic and pregnant females struck M. Cazeaux and others, and led them to attribute to chloro-anemia those effects which formerly were traced to plethora; and there is, doubtless, truth in this view, if it be not pushed too far. How, then, about bleeding? As far as we can judge, it must be decided upon in individual cases, independent of theory. If the attack be such as to require it, if the symptoms be urgent, and the strength good, then bleeding is admissible; but in estimating

the propriety we cannot leave out of consideration the prevailing type of disease. At present, for example, the circumstances must be very urgent which would induce us to abstract blood. As to the inconveniences or dangers of blood-letting, the only one of importance dwelt upon by the author is, that inasmuch as puerperal fever coincides with a "hydro-polyemic" condition of the blood, a free use of the lancet may tend to facilitate the production of this condition.

Blood-letting, as all know, may be either general or local: the former is more useful in general plethora or intense inflammation, and the latter when the disease is purely local and limited. The quantity of blood taken should be moderate, and only repeated when circumstances demand it. As to prescribing a period when bleeding ought to be practised, this is simply absurd: we quite agree with the author, that it cannot be fixed beforehand, that it must depend upon the evidence of symptoms requiring it, and that, when there is no evident necessity, it ought not to be practised.

There is one point of importance to which the author has drawn special attention, viz., the danger of inducing fainting; and, in illustration, he cites a case published by M. Depaul, of a young woman who was bled moderately in two pregnancies, and in whom complete syncope took place, with the effect of destroying the infant in both instances.

Whenever blood-letting is practised during pregnancy, Dr. Silbert advises that the patient should be kept quiet, and on light diet for two or three days.

We have thus given a short abstract of the opinions held by the author, so far as we can make them out; for after enumerating authorities for opposite views, he does not always clearly express his own. For the details upon the different points we must refer the reader to the volume itself. We do not see in it much to which we object, nor have we felt that we have acquired any additional information. We must not omit to mention, however, that there is a third part, occupied with the consideration of blood-letting applied to various diseases of females, such as uterine plethora, metrorrhagia, dropsy of the amnion, hydrorrhœa, uterine neuralgia, rheumatism of the uterus, congestion of the broad ligaments, hemorrhoids, cystitis, and nephritis, &c.: in short, all the ordinary diseases of females. It would be quite useless to enter into details upon these cases unless we were writing a treatise upon diseases of females. The author, and every sound practitioner, admits that blood-letting is quite admissible in such cases, provided the severity of the disease demands it, and neither the state of the patient nor the prevailing constitution of disease contra-indicate it.

On Epilepsy and Epileptiform Seizures: their Causes, Pathology, and Treatment. By Edward Henry Sieveking, M. D., F. R. C. P., Physician to and Lecturer upon Materia Medica at St. Mary's Hospital. London: Churchill, 1858. 8vo, pp. 267.

It has been justly urged that epilepsy, as well as all those diseases which have been termed the 'opprobria medicinæ,' should, from time to time, be re-investigated with care, that all the aid afforded by the advances of the sciences of Physiology and Pathology, as well as Therapeutics, might be brought to bear on them, to assist in removing the difficulties with which their consideration is encompassed. Necessary as this work is, it seems peculiarly called for now, when, as Dr. Sieveking remarks, the labours of Bell, M. Hall, Flourens, Magendie, Muller, and Brown-Sequard, have illumined the field of the physiology and pathology of the nervous system, which, before the beginning of the present century, was enveloped in darkness. The qualifications of Dr. Sieveking for this task, and the propriety of his undertaking it, are evidenced by the works he has already accomplished; and a book from his pen on the subject of epilepsy, such as that now before us, will, we are very confident, be gladly welcomed. In it the history, pathology, and treatment of the disease are very fully discussed, the leading feature being that the epileptic fit is regarded but as a manifestation of a condition which is persistent through the intervals, ready to show itself again and again, by renewed outbreaks, on the application of the exciting causes; but generally to be recognised by the careful investigator, independently of, and in the interval between, its peculiar paroxysms, and constituting the diseased condition, to the removal or prevention of which treatment must be directed to be successful.

The general features of the seizures are first described, and then the individual symptoms are considered in detail. Whilst Georget states that *premonitory symptoms* occurred but four or five times in one hundred cases, Dr. Sieveking's experience tallies with that of Romberg, who met with them in about one-half of his cases. Many examples of these symptoms are given; and it appears from those that have fallen under the author's own observation, that the premonitory sensations referred to the trunk or extremities are much more numerous than those which are described as having their seat in the head. In eight instances they were referred to the brain or its immediate dependents, the eyes; and in nineteen their site is stated to be in other parts of the body. The occurrence of these symptoms

in different localities is regarded by some as indicative of the centric or eccentric nature of the disease; but, as Dr. Sieveking does not regard epilepsy as presenting these two forms, he does not attach much importance to this circumstance. In this we fully agree with him; for, though in some cases the site of the warning symptom is determined by, and depends on, some local cause, the fact that the "aura" almost always seems to proceed, not along the course of a nerve, but along the skin, proves that it is a false perception,—a reflex sensation, caused by a morbid process in the brain, or a part of it.

As to whether *insensibility* and *loss of consciousness* are symptoms always found in epilepsy, there is much difference amongst observers. At the trial of Palmer for the poisoning of Cook by strychnia, there were many conflicting opinions expressed on this point. Dr. Todd asserted that consciousness is always lost, and in his Lumleian Lectures he has laid much stress on this fact. "Loss of consciousness," he says, "is pathognomonic of epilepsy, and often its only symptom;" and epileptic convulsions without loss of consciousness are, he believes, essentially distinct from true epilepsy, and may be developed by even a slight morbid irritation of the brain. Dr. Sieveking's experience leads him to believe that there are cases in which some degree of consciousness is retained. One of his patients has assured him that she is aware of circumstances going on around, and that she retains sufficient memory of what has been spoken in her presence to repeat it after the paroxysm has subsided, though at times the unconsciousness is absolute. He refers also to Pritchard, Poupart, and Bright, as having met with somewhat similar cases. This is a matter that requires further investigation. Not a little of Todd's theory of epilepsy hinges on the loss of consciousness. It is often difficult to decide as to whether it is lost, or there is insensibility or not, especially in cases of hysteria; and its presence or absence is regarded by many as the only diagnostic between hysteric and some other forms of convulsions and epilepsy. Not very long ago a case of convulsions in a pregnant woman came under our notice, in which, in consequence of detecting a degree of consciousness, though it was very obscure, we were enabled to arrive at a correct diagnosis (proved by the result) as to its being hysteria, though it had been regarded and treated as one of epileptic convulsions.

The *character* of the convulsive movements is next considered. Though these are generally clonic, or alternating with relaxations, they are sometimes tonic or tetanic. Instances of their being limited in extent are also given; and in con-

nexion with this the condition of the muscles of the neck, on which Marshall Hall founded his theory of the disease, and proposed its treatment by tracheotomy, is alluded to. But while it is admitted that spasm of the muscles of this region, the platysma, sternocleido-mastoid, scaleni, and trapezius, more particularly, materially affects the circulation of the blood in the vessels of the head, the literal interpretation and careful observation of all the symptoms of epilepsy do not allow Dr. Sieveking to regard this as more than a small part of the phenomena.

Biting the tongue and inside of the mouth indicates the violence of the spasm and the extent of the loss of consciousness; but the absence of this symptom by no means proves the seizure not to have been epileptic, for it is a mere accident, depending on these causes. In Dr. Sieveking's cases it occurred at the rate of 37·4 per cent.

The pulse is said to present no pathognomonic feature. During the intervals its force and frequency exhibit the usual variations which are found to be associated with greater or less physical strength. Its prevailing character is that met with in subjects who want blood and tone; it is generally much accelerated, feeble, and soft. Cases are quoted from Dr. Burnett and Morgagni, in which there was remarkable slowness; in one it was as low as 20, or sometimes 14 in the minute. Dr. Radcliffe says that during the fit the pulse ceases at the wrist.

As to the *periodicity* of the attacks, his investigations lead the author to have no belief in it, though in females there may be an approach to this character from the association of the fits with the processes occurring periodically in the female system. That the moon has any influence, though still believed in by some, is disproved by the statistics quoted from Moreau; and as to the effect of day and night, the numbers quoted from Dr. Boyd show, contrary to the general opinion, that the paroxysms occur rather more frequently during the day than night. The season, too, seems to have very little effect.

Headach is a symptom of much importance. It occurred in 66·0 per cent. of the cases under the author's care. In fifty-six cases it is stated to have occurred thirty-seven times. It was constant or frequent in twenty-one cases; occurred before the fits *only* in four cases, and after them *only* in twelve. Its pathological significance, when occurring only after the fits, is very different from that in the other cases. Much importance is justly attached by the author to this symptom, which is often the only manifestation of a condition afterwards revealing itself by the full development of the paroxysm. The characters of

this species of headach (cephalagia epileptica) are well described.

As to the symptoms to be observed in the interval—the more frequent the fits, the more marked are these; but even where the interval is long, a certain peculiar deviation from health may be found.

"There will be the characteristics of a nervous diathesis; an excitable and frequently irritable manner, a restless eye, a quick but feeble pulse; there is more or less difficulty in collecting the thoughts, and connecting the different links of mental association; while, at the same time, one or other of the organic functions presents a palpable deviation from health; the organs that are more particularly under the domain of the sympathetic ordinarily show that they are deficient in vigour, that they want that stimulus which the vascular and nervous systems supply when the individual enjoys robust health. Hence a common symptom is a torpid state of the intestinal tract, as shown in flatulent dyspepsia, eructations, intestinal flatulency, and constipation. An associated symptom is an enlarged state of the pupil, such as is commonly met with in persons suffering from the presence of intestinal worms, from a morbid state of the generative organs, or from a torpid condition or enlargement of the mesenteric glands; occasional vertigo. Irregular, frequent, or constant headach, with or without vertigo, and not traceable to any definite exciting cause; anomalous sensations in different parts of the body; slight partial spasmodic seizures, more particularly a distressing sense of suffocation or choking, belong to the symptoms commonly met with in the free intervals."

The *sequelæ* are next considered. These are affections of the *intellect*, *paralysis*, and *death*. Dr. Sieveking coincides with Esquirol and Foville, in opposition to Copland, as to the greater influence of the "petit mal" than of the "grand mal" in producing mental derangement. Dr. Todd's experience is to the same effect. There are some very interesting statistics given on these points, and also as to the frequency of the disease; on this latter point there is an error, probably typographical, at page 79, that might deceive the reader. It is said that, in round numbers, 4 out of every 3000 soldiers are epileptic; on trying the calculation, it will be found to be 3 or 4 out of every 1000 that is meant; to be exact, 3·07. From the data that Dr. Sieveking has collected, he infers that, in 1850, the number of adult male epileptics in England was 18,000. The manner in which the calculations that might be made from the several facts stated confirm one another, and might justify him in placing still more reliance on them. Thus, if 3264 cases of epilepsy among soldiers afforded 2·94 per cent. of deaths,

the 1630 deaths in all England in 1850, from a population of 17,750,000, should indicate 55,442·2 cases of epilepsy. And again, as 1,061,233 soldiers afforded 3264 cases of epilepsy, the population of all England should afford 54,605·4 cases,—a result sufficiently close, considering the soldiers were a picked class, to justify the belief that there were in England, in 1850, about 55,000 epileptics.

There are some remarkable facts quoted from French and other sources, showing the effects of *endemic* influences, and proving that we must not attach too much importance to the differences of race. French and English writers differ much as to effect of *sex*, as predisposing to the disease. In Dr. Sieveking's own cases the sexes were nearly equal; but he quotes the returns of the Registrar-General as showing an excess of 4·53 per cent. of male deaths over female from this cause. However, he omits to observe that the total of male deaths is greater than of female. Thus in London the total deaths of males were 30,852, of which there were from epilepsy 202, that is 0·65 per cent.; of females the total was 29,217, of which 183 were from epilepsy, that is, 0·62 per cent.

It will, perhaps, be considered more generally interesting to ascertain the age at which the disease is likely to first show itself. The statistics on this point are liable to error, on account of the uncertainty that prevails, as to whether infantile convulsions should be included. Dr. Sieveking gives the ages at which the disease appeared in his 58 cases, and quotes the statement of Moreau as to 995 cases. We may add the data drawn by Bouchet and Cazauvielh from their 64 cases, and reduce all to a per-centage.

Taking the average of the three statements, it will appear probable that in 100 epileptic patients, 38 will have shown the disease before 10 years of age; 36, at from 10 to 20 years; 11, at from 20 to 30; 6, at each of the next decennial periods; and 4, at from 50 to 60.

As to the condition of individual organs, as predisposing to epilepsy, we observe that Dr. Sieveking has not found any constant relation. Though albuminuria is so frequent in puerperal convulsions, it has not been found so in epilepsy; neither have the heart, lungs, liver, or spleen, seemed to our author to present any causative relation to it, but an impaired state of the digestive power is frequently associated, perhaps, as much an effect as a cause. In a note, reference is made to Dr. Todd's statement that the epileptic seizures which take place chiefly in the night have frequent connexion with a weak heart, but Dr. Sieveking has not been able to discover any definite re-

lation. We have long been in the habit of considering some of the cases of "pseudo-apoplexy" described by Stokes, in cases of weakened heart, as minor epileptic fits. In such as we have witnessed, the loss of consciousness was very complete.

In chapter VII. the morbid appearances found after death are considered. Great importance is attached to the condition of the pineal gland and pituitary body, as described by the brothers Wenzel, and to the somewhat similar conditions found in the encephalon by Dr. Boyd. The conclusion arrived at by the author is, that epilepsy and the morbid condition of the brain probably act and react on one another.

"The epileptic paroxysm once having occurred, and initiated a peculiar process in a part of, or in the entire brain, the process might be justly assumed to react upon the epileptic paroxysm, causing its re-excitement."

The "theory" of epilepsy is next considered, or, as we would call it, the "pathology," for the appearances after death constitute only the morbid anatomy of the disease.

The classification of the various cases into different forms, as the "sympathetic and essential," "centric or eccentric," or the fourteen classes of Sauvages, is objected to,—the disease being held to be, wherever it occurs, essentially the same, the same symptoms characterizing it, and the same results following, unless checked. The exciting causes of the paroxysm may differ, and have different seats, but then the condition that they call into play is always the same. This is the view that Todd takes. That this morbid condition, essential to the epileptic seizure, is one affecting the parts within the cranium, is agreed to unanimously by all pathologists, except Esquirol and Marshall Hall. As to the nature of this condition, the author's theory may be said to be eclectic; he avoids the Brunonism of Radcliffe, and the Humoralism of Todd, as well as the plethora and congestion of other writers. The sudden and entire loss of consciousness he holds to indicate an affection of the encephaloid, and especially of the sensory ganglia. The control of the brain being withdrawn, the spinal system acquires a preponderating action, as shown by the spasms of the muscles. The irritation may proceed from without, or act directly on the brain. That a change in the balance of the circulation has a material influence in the production of epilepsy, he believes to be proved by the experiments of Sir Astley Cooper on the arteries of the neck; and he holds that, in the majority of instances, the first attack is due to an irritation, produced by derangement in the amount or quantity of the blood circulating in the brain. The

most frequent of the exciting causes act by producing this derangement. Habit has a great influence in determining the return of the fits. The eclampsia of early infancy, and laryngismus, are regarded as of the same category as epilepsy, and as often merging into it; this is held to be of interest, as no one doubts the curability of these affections. The state of the blood is considered to exercise a most material influence in producing the disease; the close alliance of epilepsy with scrofula points in this direction. But, although the disturbed polarity which induces the paroxysm most frequently depends on exhaustive conditions, Dr. Sieveking is satisfied that the state of the blood need not necessarily be impoverished, while various pathological conditions of it may be associated with epilepsy; yet that in the vast majority of cases the patients are in a condition indicating anemia.

The *treatment* is considered, as required during the fit, and during the interval. The proposal to compress the carotids in the fit is received with more favour than we feel disposed to accord it; and cases in which ligatures above the seat of the "aura" have prevented the paroxysm are referred to. As to the *interval*, Dr. Sieveking would formularize his general mode of treatment—

> "As consisting in local derivation, or counter-irritation directed against cerebral congestion, and in general roborants or tonics; the selection of the special mode in which the latter indication has to be carried out necessarily depending upon the results of the inquiries into the condition of the individual organs."

Thus, in the treatment as in the pathology, extremes are judiciously avoided.

In the concluding chapter the hygienic and moral treatments are dwelt on, and great importance is justly attached to their enforcement. We would have been glad to have had the author's views of the plan of treatment by tracheotomy, so strongly advocated by Marshall Hall, fully stated, but he seems to have considered it unnecessary, as he had expressed his disbelief in the doctrines on which it was founded.

In our review of Dr. Sieveking's valuable little volume, we have barely indicated the nature of its contents; it should be read and carefully studied by every physician practising, for of late years there have been few more valuable contributions to practical medicine, in aiding our knowledge of a most obscure disease.

Disorders of the Blood. By JULIUS VOGEL, M. D., Professor of Clinical Medicine in the University of Giessen. Translated and edited by Chundar Coomar Dey, Graduate of the Medical College of Bengal. Calcutta: 1856. 8vo, pp. 219.

THE vast number of monographs, devoted exclusively to particular subjects, that are so constantly issuing from the press in the present day, would appear to form a conclusive argument as exhibiting the rapid progress made in all branches of the medical profession during the course of the last century. We now no longer observe aspirants for literary character satisfied with confining themselves to the laborious and oftentimes thankless task of editing, revising, or occasionally adding to the already received productions of others that had lived, perhaps, some hundred years before their own time; but, assuming a bolder stand, they now select their own ground, build their own foundation, and upon it erect a superstructure according to their own conception of things,—affording them at least the gratification of feeling that what they have produced is the offspring of their own genius, and, as such, may be naturally regarded with an eye of indulgent affection. Still, in the course of this revolution, two results must be manifestly expected—the one either a comparative or absolute failure—the other a partial or complete success. Now, in the first instance, however painful or trying the event may prove to the sufferer himself, it is not without a salutary effect in a general point of view; for it must have a tendency to deter others of a similar standard of ability from embarking in the same course, thus effectually guarding the world of literature from being deluged by an overwhelming mass of ignorance and insipidity, without an isolated object of attraction to recommend a single line of it. Well it is for the public at large that they hold in their hands a weapon so formidable as this silent neglect, affording, as it does, a fair opportunity of recording a condemnation from which there can be no appeal, and in this sentence, when once promulgated, lies a check, very generally an effectual one, against all future attempts in this direction.

Success, on the other hand, whether complete or only partially so, may be almost always considered as the harbinger of something far superior to the essay that immediately preceded it. That power, which may have lain dormant for years, stimulated by the victory already achieved, and fostered, and encouraged by the applause bestowed upon its efforts, ardently pants to render itself still more deserving of the approbation it

may have received, and accordingly, under the impulse of a well-directed ambition, the mind expands beyond its ordinary level, and learns to express itself in a language that must be appreciated. Such, if closely examined, has been the career of all our great writers of celebrity,—their earlier lucubrations merely displaying the germ of that prolific ability which was yet to blossom forth in exuberant maturity in the gradual progress of time.

In certain other respects we shall also find that the literary tendencies of medical men have undergone a sensible alteration. Works embracing a vast variety of different subjects are scarcely ever indited, having been gradually abandoned for the single subject on which the writer of the present day is satisfied to devote his entire and undivided attention, so as to produce a volume complete in itself as far as the individual branch is concerned. This predominant love of specialty is rapidly gaining ground, and, instead of being checked or interferred with, it ought rather to be highly cherished and encouraged by all who feel a real anxiety for the rapid advance of true science, for a very little reflection will show us that specialty necessarily argues difficulty to a certain extent; and to overcome that difficulty, and to emerge from the arduous contest, not only unharmed, but applauded, as surely evinces not only no mean amount of ability, but likewise manifests that proper measure of self-reliance without which no sensible man ought to engage in such an undertaking.

Moreover, to be successful as a writer of specialty, Nature must have gifted the individual with a more than ordinary amount of originality, an attribute which we have already before stated, on more than one occasion, to be the rarest of all qualifications. Besides, his reading must be most extensive, so much so as to render him perfectly familiar with every fact that may have been recorded by the host of inquirers that have previously preceded him. This last consideration in itself necessarily involves an amount of mental labour and anxiety, scarcely credible to any one but to him who, unfortunately for himself, has at some period of his life directed his attention to matters of this nature, and has learned by actual experience the difficulties he has to encounter—firstly, in endeavouring to avoid most sedulously introducing as a novelty what may appear to be perfectly new to himself, but which from more diffuse reading is perhaps completely familiar and commonplace to others; and secondly, in the great care that must be employed in stating such topics only, as bear directly on the subject under discussion, to the exclusion of all others that are calculated to

distract the attention or destroy that interest which should be kept immovably concentrated on it alone. Now the interest which ought to be thrown into a work of this kind can only be kept alive by the rapidity with which fact is made to follow fact—not confusedly mingled together, but each distinct and systematic—each individual one, while perfect in itself, still acknowledging one common centre, an harmonious blending, so nicely dovetailed as to render it a matter of difficulty sometimes to detect the several points of fusion.

But if there is one subject more than another which should more especially engage the attention of the pathologist, it is that in which the condition of the blood is concerned, whether regarded in a state of disease or the reverse. As a mere matter of curiosity, under either circumstance, its examination is attended with the deepest interest, and this more especially so since the power of the microscope has at length so fully revealed the important part which this subtle fluid plays in the great drama of actual life. The eye that has once beheld that mysterious current confined within its narrow channels, sweeping along in its incessant course, propelling, as it dashes onward, its numerous corpuscles, that roll and oscillate in tumultuous confusion at each successive impulse they receive, can never forget the glorious spectacle thus presented to its view; and whilst, with a species of fascination, the gaze is riveted on the moving panorama before it, as if anxious to impress in the very depths of memory even the very faintest outlines, the mind is involuntarily led to exclaim, that in in that vivid picture in some way resides the very essence of life, the precise position of which sages and philosophers have sought in vain to locate. In fact, every circumstance undoubtedly conspires to prove that its functions are of the very highest character. With all the other constituents of the body, its sympathies are most intimate and inseparable; and it may be affirmed, as a very general rule, that there is scarcely a lesion of any one of them in which it does not enact the part of a watchful monitor, indicating its existence, and degree of intensity, and signifying, with unparalleled accuracy, the effects of those measures employed for its removal. To him, then, that would undertake to give to the profession at large a full and faithful transcript of the results of his experience, as far as the disordered conditions of its functions are concerned, a deep and lasting debt of gratitude must be due; and such an offering has at length appeared, from the pen of the celebrated Vogel, in the volume at present before us.

The book opens with a systematic classification, such as we

might expect to emanate from a teacher of such admitted eminence; and the mere grouping of its contents, if there was nothing else, would be quite sufficient to mark out the mind accustomed to appeal to the senses of his auditory—and, at the same time, skilled in impressing on their memory the great leading features of his subject—from which a continued series of deducibles may be easily drawn. And herein consists the art, if it may be so fairly termed, of the finished writer, not rushing impetuously into a mass of unsupported assertion, but gradually feeling his way, carrying his reader along with himself by, apparently, an unconscious effort, until he at length reaches that climax which it was his desire to attain. The classification of M. Vogel is as follows:—

"First Group—Changes in the (relative) amount and in the properties of the normal blood-constituents.

"Abnormal conditions of the red blood-corpuscles—increase, diminution, qualitative changes.

"Abnormal conditions of the colourless blood-corpuscles (leukæmia).

"Abnormal conditions of the fibrin—increase, diminution, changes in it (inopexia).

"Abnormal conditions of the albumen—increase, diminution, changes in it.

"Abnormal conditions in the amount of salts, alkalies, fats, and extractive matters contained in the blood.

"Second Group.—Abnormal conditions of the quantity of the blood, fulness of blood (plethora), and deficiency of blood (oligæmia). As an appendix, the more compound forms, anæmia and chlorosis.

"Third Group.—Abnormal accumulations of noxious matters in the blood.

"Sugar in the blood; acid in the blood; uric acid and oxalic acid; ammonia, sulphuretted hydrogen, and analogous substances; urea; biliary matter; foreign bodies in the blood.

"As an appendix: putrefaction of the blood and pyæmia—scurvy."

In the general course of the work we shall find that the author has taken up each of those premises individually and thoroughly examined them all; but, while admitting how important it is to the practical physician to be acquainted with those peculiar changes that take place in the blood under the influence of various forms of disease, he, at the same time, candidly acknowledges the difficulties that must be overcome in attempting to arrive at a conclusion that may be safely relied on, as well as the time and labour that must be expended in the tedious course of the process.

"Many important facts," he observes, "as regards clinical medicine, have been thereby obtained; but, on the whole, the results arrived at in this way have neither answered our expectations nor corresponded to the time and labour devoted to the investigations. It is important, even for practical men, to know the causes of this partial failure, and to learn to avoid the various errors that have been committed. They are chiefly as follows:—

"In the first place, these investigations, from the manner in which they are usually made, rather mechanically than with scientific precision, embrace only a small portion of the possible, nay even of the actually demonstrated, anomalies of the blood. The increase and diminution of the corpuscles, of the fibrin, albumen, and water of the blood, which are deemed by many pathologists the only, or, at least, the most important, disorders of the blood, form such a small part of this subject, that the practitioner and clinical physician find, in a system of blood disease based upon that restricted view, neither the necessary material for the diagnosis, nor for the treatment of the cases of disease that occur to them.

"A further reason why these investigations have found less access into medical practice than is really due to them lies in the methods of analysis hitherto employed. These are, in part, inexact and defective, as in the cases of quantitative determination of the blood-corpuscles; and they are, moreover, almost all of such a nature, that practical and clinical physicians can make nearly no use of them. The methods of investigation ordinarily practised are so minute and laborious, and take up so much time, that the physician rarely determines to undertake an analysis of the blood; and, even when he has a chemist by his side to perform the analysis for him, he obtains its results usually only after several days, so that their employment for therapeutical purposes is rarely possible, in acute diseases at least. Hence it is highly desirable that methods of blood-analysis be invented, so simple that every physician may employ them, if necessary, at the bedside of the patient, and that thereby the wished-for result may be obtained in a short time, in a few minutes, or, at most, in from a quarter to half an hour. I have taken much pains to invent such methods, and shall, in the following pages, communicate some of them, which have already been so far developed that they admit of a practical application.

"There is still another circumstance which renders it dangerous to infer at once a blood-disease from every variation in the composition of blood found by analysis. The blood is very variable in its composition, and in a state of ceaseless change. It constantly gives off materials during the metamorphosis of tissue in each individual organ, especially in the organs of secretion, the kidneys, the liver, the intestine, the skin, and the lung; but it likewise constantly absorbs substances from the food and the drinks that are introduced into the stomach and intestines; from the secretions of the liver, the intestines, and the pancreas; from the chyle and the lymph; nay, from every individual part of the body, during the transformation

of tissue. Hence we must conclude—and direct investigations raise this conclusion into a certainty—that not only is arterial different from venous blood, but that the blood of each organ has a peculiar, more or less different, composition. Any specimen of blood, obtained by venesection or in any other way, does not, therefore, express, accurately speaking, the average composition of the entire blood-mass; it shows only the composition of the blood contained in the part from which it is taken.

"This evil is, indeed, lessened by the circumstance, that most specimens of blood, which are analyzed, are obtained by venesection from one and the same part of the body,—from the vein of the arm. But even if we put aside these differences in the composition of the blood of the individual parts of the body, and assume that every specimen, which is analyzed, indicates the average composition of the whole blood, there is still another circumstance to be considered, which warns us to draw only cautious conclusions as to blood-diseases from deviations shown by analysis, viz., that the composition of the blood may be temporarily altered by physiological influences. Each glass of water that is drunk and rapidly absorbed renders the blood, at the time, richer in water; while, on the contrary, after long-continued thirst, during which watery secretions have been separated from the blood by the kidneys, the skin, and the lungs, the amount of water in the blood is temporarily diminished; by the copious use of common salt, the amount of common salt in the blood may be raised in an instant, and soforth. Hence, in many cases it is difficult to decide whether a deviation from the normal composition of the blood, found by analysis, is pathological, and indicates a blood-disease, or only physiological, i. e., such as would be again removed in a short time by physiological processes, and, therefore, demands no therapeutical interference. But these physiological variations of the blood are, fortunately, restricted within tolerably narrow limits, and we are quite justified in inferring an actual pathological disorder of the blood whenever its quantitative composition, found by analysis, differs considerably from the healthy standard. To facilitate such conclusions, and to caution against deceptions, the limits of these physiological variations, so far as they can be determined, are stated under the head of each constituent."

In a mass of difficulties so complicated it would appear a matter of impossibility to pilot a vessel to the desired haven, and bold and steady indeed must be the hand that ventures to grasp the helm in the face of so many intricacies. For when we come to contemplate coolly the numerous sources of fallacy that must occur in the course of this investigation, respecting the condition of the blood in its healthy and unhealthy state, and when we consider how trivial, and still how numerous, may be the causes which tend to produce an alteration in its nature at particular junctures, and in the briefest possible space of time,

we cannot avoid entertaining involuntarily the belief that no great reliance can be placed on deductions emanating from a source so transitory and unsettled. Still, however, it must be admitted that in several diseases valuable hints may be derived from its examination, and in cases where any doubts may exist as to the real nature of the lesion in question, this, in conjunction with other corroborative testimony, may lead to definite inferences in the formation of our opinions. In despite of those obstacles, Professor Vogel has, however, succeeded in writing a most interesting work, replete with varied and valuable information, and displaying in the history and literature of his subject an immense amount of research and logical conclusions. We will quote a few extracts as a specimen of the character of the work.

At page 36 we have the following remarks on cyanosis:—

"The causes of cyanosis are very various. They may be arranged in two great groups,—in the one the supply of oxygen to the blood, and consequently the oxydation of the blood-corpuscles, is prevented by derangements of the respiration, or the circulation, &c.; in short, by causes which lie external to the blood; in the other the blood-corpuscles lose the property of absorbing oxygen. On account of the great practical importance of this subject, we shall consider here the most essential causes somewhat more in detail, although the first group of them does not, properly speaking, belong to the blood diseases. Cyanosis arises—

"1. If by any obstacle in the department of the respiratory process the access of air to the blood in the pulmonary capillaries is prevented or impeded. Such obstacles are, closure or narrowing of the glottis by spasm, œdema, and croupous inflammation of it; closure or contraction of the trachea and bronchi by spasm, mucus, blood, foreign bodies, croupous membranes, and inflammatory thickening of the mucous membrane; entrance of air into the pulmonary cells prevented or retarded by inflammatory or tuberculous hepatization of the lung; by pulmonary œdema and compression of the lung; by exudation in empyema and hydrothorax; by air in pneumothorax; respiration impeded or prevented by diseases of the thoracic parietes, of their nerves or muscles, and of the diaphragm; and by pulmonary emphysema; elevation of the diaphragm by enlargement of the abdominal organs, tympanitis, ascites, &c.

"2. If by any derangement of the circulation, the blood is prevented from circulating through the lungs, and from absorbing oxygen in them, in the same way as in the normal condition. To this head belong disorders of the heart's action, reduction of it to a murmur; obstruction of the pulmonary vessels by coagula and other matters foreign to normal blood; stagnation of blood in the lung (pulmonary stasis, hypostatic pneumonia); shrivelling up of the pulmonary tissue, with partial obliteration of the pulmonary vessels;

compression of the latter by exudations, &c.; direct passage of venous blood from the right into the left heart without its having passed through the lungs (by abnormal communication between the right and the left heart, patency of the ductus arteriosus Botalli and the foramen ovale after birth).

"3. If the air received into the lungs contains no oxygen, or less than the proper amount of it (breathing in irrespirable varieties of gases, in carbonic acid and carbonic oxide gas, &c.)

"4. In many cases the blood-corpuscles lose totally or partially their capacity of absorbing oxygen; agitated with air, they no longer redden at all, or do so incompletely (dyspnœa and apnœa of the blood-corpuscles). This change of the blood-corpuscles was demonstrated by Dujardin and Didiot in some cases of serious disease (in certain severe cases of typhus and pyæmia, in the last stage of pulmonary tuberculosis). I have likewise found it several times completely in the dead subject, and in some severe cases of disease, partially at least, in the form of diminished capacity of the blood-corpuscles to redden themselves. The diagnosis is very easy; we require only to agitate with air defibrinated blood, or blood-callus broken up and mixed with serum. This is best done in a large glass, which contains for one volume of blood ten volumes of air at least. Normal blood becomes very rapidly light red; after some time it again becomes dark, but reddens again on agitation with air, and very long retains this property. Defibrinated blood of a venesection, kept in an open glass, and agitated with air from time to time, retains generally for weeks this property of reddening by oxygen of the air, although subsequently the reddening results more slowly and incompletely than at the commencement, when it is fresh. If the blood, while in the living body, loses this property, important effects ensue; in higher degrees of this change life can no longer exist, and death very rapidly sets in, but even slighter degrees produce very considerable disturbance of the metamorphosis of tissue. Hence the subject has a great practical importance. It is a great pity we do not yet know the causes which deprive the blood-corpuscles of the capacity of absorbing oxygen."

And so on to the symptoms and therapeutics of the disease.

This extract will afford a quite sufficient idea of the clear and argumentative manner in which the work has been written. The article on chlorosis is truly grand, and we deeply regret to say that the entire is far too long for insertion, and we shrink from the invidious task of garbling so finished a production. If our voice were of any avail, we would most earnestly recommend its perusal to all, but more especially to those whose peculiar line of practice necessarily leads them to encounter this tantalizing disease in all its various forms; and we feel perfectly assured they will glean from it many valuable hints, that, perhaps, never before attracted their attention. As a whole, we

would pronounce this volume to be a very decided acquisition to the medical literature of the present day, remarkable as well for its real intrinsic worth, as from the more extraordinary fact that it has been translated from one foreign language into another by a native of an eastern clime, who has succeeded in infusing into his style a purity and elegance of language which, under the circumstances, are most truly astonishing.

Prone and Postural Respiration in Drowning and other Forms of Apnœa or Suspended Respiration. By [the late] Marshall Hall, M.D., F.R.S. Edited by his Son, Marshall Hall, Esq. London: Churchill. 1857. 8vo, pp. 216.

> "Facilis descensus Averno;
> Sed revocare gradum, superasque evadere ad auras,
> Hoc opus, hic labor."

"One fact is better than a hundred arguments." Well, perhaps it may be so, and yet we hesitate not to record that we place but little faith in facts—anything expressed in the hackneyed iteration of the above sentiment to the contrary notwithstanding. But we would be more explicit: facts considered *per se* may or may not be of value, according to circumstances; they are calculated to lead as often to erroneous as to trustworthy conclusions; nay, they have the peculiar tendency towards the former by virtue of their very stubbornness and inflexibility, by which we are tempted to indulge in generalizations before we have succeeded in accumulating and arranging, in weighing and comparing, a sufficient number of these too often contradictory and conflicting materials. After this patient process shall have been duly performed, and not till then, will facts be estimated at their true value, and be made to occupy their right position as a philosophical element, which, after all, consists but in this, that they constitute the mere *steps* by which we arrive at the discovery of *principles.* How remarkably do we see this truth exemplified in the history of our so-called specific remedies, which, with very few exceptions, have one by one been doomed to disappear, according as the light of advancing science has disclosed to the physiological inquirer the true principles upon which these, or any remedies, are to be applied, and has thus suggested the employment of a rational and scientific method of treatment, in place of a compliant, however time-honoured, routine.

We have been led into these reflections by a careful perusal of one of the most interesting and important works of

modern times, a work whose object is to invite the attention of the profession to certain new views regarding the rationale of *apnœa*, its phenomena and physiological history; also to the practical results which have arisen from the adoption of such remedial measures as have been suggested by the hypothesis that the views put forward regarding the nature of *suspended respiration* are correct.

The subject of the work whose title we have prefixed is one of the deepest importance, not merely to the speculative physiologist, but also to the practical physician, and, we may add, to every intelligent man that has his heart in the right place.

The name of Dr. Marshall Hall has been long associated with some of the most brilliant discoveries in physiology, and to his researches has practical medicine been much indebted for many valuable suggestions. Endowed with remarkable energy of character, with a mind of a peculiarly active and busy turn, he began at an early period of life, with the courage and sagacity of a true sceptic (we use the term in its pure sense) to mark out for himself a path of original and untrammelled thought. To enumerate the various clever and ingenious writings which have emanated from his pen, were quite superfluous at the present time, as they are well known to our readers. We cannot avoid, however, to remark here that his works appear to lack that character of calmness and composure which we love to trace in a philosophical essay, features which lend an agreeable charm to the writings of such men as Holland and Brodie. But different men have different modes of thinking and of writing; and the grand characteristic of our author's method would appear to be *newness*, *revolution*, *reform*. Here we find no diffuse details of the labours of former observers, no efforts to enlarge and improve established theories; he seldom proceeds to laudatory lengths in speaking of the received doctrines of the period, but to the root of some long-cherished hypothesis he applies at once the remorseless axe, saps the very foundation of the fabric, and raises in its place a superstructure of specious and startling import. But here the restlessness and ferment of his very active mind deny him the enjoyment of a calm and quiet survey of his work; on the contrary, do we not sometimes recognise rather much of that sententiousness which not only fears, but anticipates approaching opposition, and which prompts to the exercise of an impatient and almost petulant mode of dealing with the objections or the errors of those who should appear to indulge even a momentary hesitation to recognise his views and adopt his suggestions.

Let us proceed, however, to consider more particularly the work before us. The first part, we are told, is a nearly *verbatim* reprint of the essay presented to the Royal Humane Society in January, 1856. The next consists in a similar reprint of papers published in the "Lancet" since that date, with observations not before published. A series of illustrative cases, with notes on obsolete modes of practice, forms the third part; while the concluding portion of the work consists in several physiological views bearing upon the subject of respiration and apnœa.

Keeping in view that his efforts were directed to the promotion of the benevolent objects of the Royal Humane Society, the author, in laying the matter before this body, commences, as it were, from first principles, so as to give a clear view of the nature of normal respiration, as well as of the physiological effect arising from its partial or complete suspension. In healthy respiration we have oxygen inhaled and absorbed into the pulmonary vessels, which in their turn exhale carbonic acid; by this latter substance (according to the author's well-known theory) a specific effect is produced upon the nerves, which proceed from the lungs *towards* the spinal *centre*, and which, having traversed this part in some mysterious manner, are distributed to the inspiratory muscles. This reflex or diastaltic process continues to be exercised as long as the fine filaments of the pneumogastric nerve are subject to the action of their appropriate excitant, namely, the carbonic acid gas exhaled *from the blood* into the air-cells; and the result is normal respiration. The eighth nerve, however, is not the sole excitor, for the well-known effect of a sudden application of cold water to the face, or of the slow descent of the body into a cold bath, induces a similar vital effort, through the action of the cutaneous nerves of the face or the general surface upon the spinal centre; and this fact has suggested to Dr. Marshall Hall the employment of external cold in opposition to that of warmth, as an important adjuvant in the treatment of apnœa, as we shall see further on.

The change in the entire process, when the normal acts of respiration are obstructed, as in apnœa, is thus described:—

"When the respiration is entirely suspended, there is no exhalation of carbonic acid, the excitant of respiration; there can, therefore, be no *diastaltic* respiration; but the carbonic acid which ought to be exhaled in the lungs is retained in the blood, poisons it, circulates with it through the system and its various organs, and excites various abnormal conditions and actions. The mode of action is not now *diastaltic*, but centric in the spinal centre, and *ecstaltic*. The

respiratory movements are no longer normal, and rhythmic acts of inspiration and exspiration (*sic*), but abnormal and irregular *expiratory* movements, with a peculiar opening of the mouth, flexion of the body, and frequently with the ejection of foam, followed by *in*spiratory efforts. Such is the character of the respiratory movements in apnœa. They are *pathological*, not physiological; and they are, I repeat, centric or *ec*staltic *from* the spinal centre, not *di*astaltic, *through* it. The blood is poisoned by the carbonic acid so retained, the organs are poisoned in their turn by this blood poison. Our most strenuous efforts must be exerted to eliminate and remove this poison from the blood and from the system. All other efforts are subsidiary, although auxiliary; and, if they at all take the place of this, injurious."

But if the blood be poisoned, which no doubt it is, by the retention of carbonic acid in excess, and if the deadly action of the highly carbonized fluid be exerted *primarily* on the nervous centre so as to induce ecstaltic movements, may we not, by a parity of reasoning, infer that, in the normal condition of respiration, the vitalized or *de*carbonized blood may exert an excitant influence on the same centre, and thus deprive also the pneumogastric nerve of its reflex function? Or, again, to take the other view:—If the healthy process be a reflex one through the action of a small quantity of carbonic acid, in the form of gas, upon the minute filaments of the eighth pair, may not an excess in quantity of the same substance benumb the sensibility of that nerve, and thus lead to the suspension of the respiratory process through the mere absence of peripheral excitement. We know that the property of many medicinal agents, for example, opium, electricity, &c., is, in small quantities, to excite and invigorate; in very large doses, to overwhelm and depress; it may, therefore, be a matter worthy of further consideration whether carbonic acid may not be endowed with a like property. But to proceed. With a view of demonstrating that the deadly effects in apnœa are dependent less on the limitation of a supply of oxygen than upon an obstructed exhalation of carbonic acid, the following experiments are adduced:—1. An animal, confined in a limited portion of nitrogen gas mixed with a little atmospheric air, breathed freely for some time, but began to suffer as soon only as carbonic acid accumulated. 2. An animal, placed in carbonic acid, had its respiration suspended almost immediately, and died very soon. In the first experiment the inhalation of oxygen was nearly excluded; in the second, the exhalation of carbonic acid was intercepted. In animals that have been submerged, experiments tend to show that after all struggles have ceased, and the last gasping

efforts at respiration have subsided, a certain period elapses during which the *circulation continues* to be carried on, but finally subsides into true asphyxia. These phenomena have been observed to proceed with a degree of rapidity inversely proportionate to the age of the sufferer, to its temperature, to its degree of activity, and to its elevation in the zoological scale; and this principle may be further illustrated by observing the effects of the submersion of hybernant animals, who can, it is well known, resist the destructive influence of a suspended respiration for a considerable time.

That the duration of life in a case of suspended respiration is inversely as the temperature, within certain limits, has been ably shown by the investigations of Edwards, and more recently by those of M. Brown-Séquard.

According to the former observer, kittens of two days old immersed in water at the temperature of—

32° F.	lived	during	4	min.	33	sec.
50°	„	„	10	„	23	„
68°	„	„	38	„	45	„
78·5°	„	„	34	„	30	„
86°	„	„	29	„	0	„
106°	„	„	10	„	27	„

Death, therefore, has been the most rapid in very cold, also in very *warm*, water; more protracted in temperate.

Now, M. Brown-Séquard's researches have reference rather to the influence of the temperature *previous* to submersion; thus, several rabbits of two days old were drowned in water of 77° F. But those that had been previously cooled to—

96° F.	lived	for	12	min.	
85°	„	„	18	„	30 sec.
74°	„	„	23	„	
65°	„	„	28	„	

According to the principles involved in these researches of MM. Edwards and Brown-Séquard, an abstract of which we have given in the above tables, we are now prepared to appreciate and to coincide in the practical objections raised by Dr. Marshall Hall to any attempts at the application of warmth as a *first* step in the treatment of apnœa; over and over again throughout the book he denounces the employment of a continuous *warm* bath as a most destructive measure; nay, in one place (p. 46) he speaks of the *delay*—occasioned by having recourse to this and other means previous to using the "ready method"—as nothing short of homicidal!

The physiological reader does not require to be reminded of the constancy with which, in a state of health, the rate of the respirations and that of the pulsations are numerically related; thus, if the heart act slowly, the respiratory movements are prolonged; and when the heart's action becomes more rapid, the respiration is proportionally accelerated. Now, as long as a spark of irritability remains in the heart, there is a hope of resuscitating a person from a state of apnœa, and this may be *attempted* in two very different and opposite ways; but, if our author's view be correct, it can be *achieved* but by one. The grand distinction which he draws between the means recommended in the rules of the Royal Humane Society and those suggested by himself in his memoir, we shall endeavour briefly to state. "These rules," he says, "may be summed up in one word—*warmth!* The idea is repeated no less than eight times." This application of warmth, by means of blankets, warming-pans, bricks, warm baths, &c., can, at the least, only accelerate the circulation of *blood*, which is already highly *poisoned;* it makes no provision for the removal of fluids from the back of the mouth and pharynx, and whose presence there, while the sufferer is permitted to maintain the supine posture, may act as a fatal impediment to the entrance of air into the glottis. Now the final purpose of *respiration* requires that it should be *proportionate* to the circulation; if, therefore, we endeavour to excite an acceleration of the latter, while the former is in abeyance, we only add to the mischief already existing, and even our best directed efforts now at an artificial inflation of the chest can never supply oxygen with a rapidity commensurate with the requirements of the increased blood-current. But the appropriate remedy for *apnœa* is not heat nor blood, but simply *air*. Suppose that a spark of contractility remains in the arterial system,—"lateat scintillula forsan,"—have not the experiments of Edwards and Brown-Séquard shown that under these circumstances a *moderate* temperature is most conducive to the prolongation of life? Does not, also, a *slow* circulation require slow respiration, as in the hybernating animals? Keeping these facts, then, in view, the suggestions of the author regarding the *primary* indication of treatment are founded on the soundest reasoning, and promise, therefore, the most rational hope of success. They are simply reducible to two:—1. Excite respiration—and, if this fails—2. Imitate respiration slowly.

The new rules for the treatment of asphyxia, and which are founded on the above principles, are thus detailed:—

"I. The essential, or the means to be adopted in every case:—

"1. Send with all speed for medical aid, articles of clothing, blankets, &c., but—

"2. *Lose not a moment of time; treat the patient on the spot, in the open air, exposing the face and chest freely to the breeze* (except in too cold weather); then—to excite respiration—

"3. Place the patient gently and for a moment on the face, to allow any fluids to flow from the mouth.

"4. Then raise the patient into the sitting posture, and endeavour to *excite* respiration; by irritating the nostrils by snuff, hartshorn, &c.; by irritating the fauces by a feather, &c.; by dashing *hot* and *cold* water alternately on the face and chest. If these means fail—

To *imitate* respiration:

"5. Replace the patient on his face, his wrist under his forehead, and—

"(1.) *Turn* the body gradually, but completely, on the *side*, and *a little more;* and then again on the face, alternately.

"(2.) When replaced, apply pressure along the back and ribs, and then remove it, and proceed as before.

"(3.) Let these measures be repeated gently, deliberately, but efficiently and perseveringly, *sixteen* times in the minute, *only.*

"6. Continuing these measures, rub all the limbs upwards, making firm pressure, *energetically.*

"7. Replace the wet clothes by such other covering, &c., as can be procured.

"*Omit the warm bath until respiration be re-established.*

"II. The occasional means, to be further tried when convenient:

"Apply galvanism—along the diaphragmatic nerve; or through the diaphragm and intercostal muscles.

"2. Induce the inhalation—of oxygen—or of dilute pure ammonia."

From the mass of evidence supplied by numerous experiments on the dead subject, the author draws the following conclusions: these experiments having been repeated, and their results confirmed by several observers, Mr. Paget, Dr. Snow, Messrs. Fox, Hunter, Bowles, and others:—

"1. In the majority of cases, it was impossible, by applying and removing pressure to and from the sternum and ribs, to induce effectual expiration and inspiration, the body being in the *supine* position. 2. In some cases the application of the pressure in this position induces a little gurgling *ex*piration, *no in*spiration occurring on its removal. 3. In one case, in which it seemed impossible to induce expiration by making pressure, inspiration became possible after applying pressure with some degree of violence, some obstacle being removed; was it the tongue which had fallen backwards, and had been replaced by the impulse of the expired air? 4. In another

case the epiglottis was found, on examination, pressing against the posterior part of the pharynx, so as to obstruct the entrance into the windpipe. 5. In *numerous* cases, fluids, either present in the mouth, or regurgitated from the stomach, were found to obstruct the entrance into the air-passages. 6. We can therefore never be confident of being able to induce respiration in *any but the prone* position, or position approaching the prone, *by any means!* 7. Nay, one cannot be assured that, in *attempting* to induce *in*spiration in the *supine* position, we do not force foreign matters into the trachea, and so *destroy the patient.* 8. The same danger attends all other positions, however slightly inclined towards the supine. 9. In the prone position, the means recently proposed to accomplish respiration—viz., *The alternate pronation with dorsal pressure, and the removal of that pressure, and rotation*—HAVE NEVER FAILED, although our experiments have been almost innumerable. 10. It is plain that in the *prone* position the tongue tends to fall forwards, and all fluids flow from the pharynx and mouth, leaving the entrance into the larynx FREE. 11. It is demonstrated by our experiments, that when the subject is laid prone, the counter-pressure on the thorax and abdomen induces expiration, the degree of which is augmented by dorsal pressure, and that these phenomena are reversed on removing that pressure and on rotation. 12. Such manœuvres are *equivalent to respiration*, and respiration is the remedy for *apnœa:* the conclusion is obvious. 13. All this can be said of no other mode of proceeding hitherto devised. 14. In the present state of our knowledge, then, alternate *pronation* and rotation, and pressure, as just explained, are *the remedy for apnœa.* 15. But these measures must be administered *on the instant, on the spot, in the free air.* 16. All *delays*, and *all* other measures hitherto discovered and applied, *are* delays: removal, the warm bath, galvanism—are *homicidal!*—a verdict which no authority, nothing short of such indubitable experiment, made by competent persons, as has *not* yet been made, can gainsay. 17. Continued cold, within physiological limits, prolongs life in the circumstances of apnœa; continued warmth shortens it, and is therefore *opposed* to recovery, notwithstanding the place it has so long held amongst the rules for rescuing the drowned, &c. 18. *Sudden* cold and sudden heat, and especially the two alternately, are, on the contrary, *excitants of respiration*, and therefore remedies in the *early stage of apnœa.* 19. In general, nothing can be of more fatal tendency than the time lost in removal—the warm bath—galvanism. 20. I know of nothing in medicine so near *demonstration* as the proofs of the dangers of the former system, and of the simplicity, the safety, and the efficacy of the *Eupnœa* of postural respiration."

But, although a patient may be so far resuscitated from a state of suspended respiration as to be to all appearance safe, there is yet a hidden and remote danger arising from a tendency to relapse, even after many hours, into a condition of secondary apnœa. Many cases of this kind are on record, and it is with a view of obviating this danger especially that the

author has strongly recommended the inhalation of dilute pure ammonia as a "special preventive." He says:—"The specific antidote to this blood-poison is, the free inhalation of dilute pure ammonia. This gas actually *neutralizes* the carbonic poison in the pulmonary blood."

We have now presented our readers with the principal views put forward in this little work. Should these establish the conviction that the circulation of carbonized blood is the true *self*-poisoning agent, and that respiration alone is the *de*-poisoning remedy, then upon these two principles must our treatment of apnœa have its foundation. That the treatment thus suggested *has* succeeded is amply proved by a large number of cases which have occurred in various parts of the kingdom. Into the details of these, which form the third portion of the work, we cannot enter, preferring rather to refer our readers to the original.

There are some few topics which want of space alone compels us to leave unnoticed—not that they are devoid, by any means, of interest or instruction—but we feel that we must now draw to a conclusion our remarks upon this final effort of a master mind, and shall merely record our full adoption of the sentiment, in relation thereto, expressed by the editor of the "Lancet:"—

"Anything more simple, philosophical, or beautiful, could not have been devised. It is proposed to call the plan the READY METHOD of treating the drowned. Infinitely preferable, in our opinion, would be the title of THE MARSHALL HALL METHOD. This designation is due to the distinguished discoverer, and the method would thus be benevolently associated with his name to the end of time."

La Vaccine, ses Conséquences funestes, Démonstrées par les Faits, les Observations, l'Anatomie Pathologique et l'Arithmétique, &c. Par le DR. G. C. VILLETTE DE TERZÉ, &c. Paris: G. Baillière. 1857. 8vo, pp. 160.

Parliamentary Report, General Board of Health. Vaccination, by JOHN SIMON, F. R. C. S. E. 1857. Blue Book.

Copland's Dictionary of Practical Medicine. Part XVIII. Article, "Vaccination." London: Longmans. 1857.

SOME time since Mr. Simon, Medical Officer to the General Board of Health, forwarded a circular to numerous British

and foreign practitioners, as well as to several European Governments, enclosing four queries relative to vaccination.

The object of this procedure was to obtain as much evidence as possible as to the "hygienic value" of vaccination, "and as to the validity of any medical objections alleged against its further encouragement by the State," from which, were a Select Committee of the House appointed, a correct opinion might be formed, previous to legislating on the subject.

Lest there may be some who have never read these questions of the Board of Health, we append them:—

"1. Have you any doubt that successful vaccination confers on persons subject to its influence a very large exemption from attacks of small-pox, and almost absolute security against death by that disease?

"2. Have you any reason to believe or suspect that vaccinated persons, in being rendered less susceptible of small-pox, become more susceptible of any other infective disease, or of phthisis; or that their health is in any other way disadvantageously affected?

"3. Have you any reason to believe or suspect (*a*) that lymph, from a true Jennerian vesicle, has ever been a vehicle of syphilitic, scrofulous, or other constitutional infection, to the vaccinated person; (*b*) or that unintentional inoculation with some other disease, instead of the proposed vaccination, has occurred in the hands of a duly educated medical practitioner?

"4. Do you (assuming due provisions to exist for a skilful performance of the operation) recommend that, except for special reasons in individual cases, vaccination should be universally performed at early periods of life?"

By some means or other these queries fell into the possession of M. le Dr. Villette de Terzé, and to answer them he has found it necessary to write a volume of 160 pages.

M. le Dr. Villette de Terzé, it seems, was one of the founders of the School of Medicine of the Mexican Republic, Obstetric Professor, and Corresponding Member of the Academy of Medicine of New Orleans, &c., &c.; but the following sketch which he gives of himself will probably throw all the light that is necessary upon his character and capabilities:—"A sincere friend of truth, independent by position, impartial by character, devoted to the interests of humanity." Surely the author might have allowed us to infer all this, if possible, from the tone of his book.

It appears that in 1856 a certain M. Bertin wrote an essay, "historical and critical, upon the attacks directed against vaccination," and that he presented it as an inaugural thesis.

M. Bertin, in his thesis, warmly advocated vaccination, argued against the identity of variola and typhoid fever, and eulogized Jenner. M. Bertin's views having been exactly opposed to those entertained by M. Villette de Terzé, the latter takes an opportunity of making an attack on "le jeune vaccinomane," while he replies to the "questionaire Anglais." It is not our intention to take up the battle for M. Bertin, neither do we purpose fighting for the departed Jenner: the former, we have no doubt, if alive, can ably answer for himself, and the memory of the latter cannot be sullied by anything that this "friend of truth" can assert.

The author, whilst endeavouring to confute the arguments advanced by "le jeune candidat," declares his own faith; and the first item is, that the germ of small-pox is innate, and that a *necessity* exists for the system to undergo a small-pox crisis. This is also a portion of the creed of M. Verdé de Lisle, and the author gives a long quotation, which the former has taken from the Arabian Rhazes, in support of this theory. We shall not give the passage *in extenso*, but condense the doctrine of the Arabic sage upon this subject. Rhazes, it seems, considered that the blood changed twice during life, first from the fœtal fluid of infants to that of the more mature youth, and thence to that of old age. There were, then, three descriptions of fluid, differing in many respects: the first, or earliest, abounding more in humours and heat than the second, and the second than the third. Now the first fluid Rhazes likened to the must of the grape, the second to the perfect wine, and the third to vinegar or wine that had soured. As the must, to become perfect wine, should undergo fermentation, so the infantile blood, to become that of the youth, should also undergo fermentation, and rid itself of the superabundance of its humours, &c. The blood, of necessity then, should ferment, were the individual to live; but this fermentation was the small-pox; therefore, were the individual to live, he must undergo the small-pox:—"C'est," as the passage is quoted from Rhazes, "pour toutes ces raisons qu'il est rare, qu' un enfant soit exempt de la petite-vérole," and in this our author must concur, since he asserts, "il est impossible, je crois, de trouver une comparaison plus ingénieuse"! But to prove this tenet it is necessary that small-pox should have existed from remote antiquity, in fact, *ab initio*, and the long quotation from Rhazes is introduced for this purpose, also in order to show that Galen had known the disease. It would be profitless to endeavour to discover how or from whence variolous poison first emanated. No one can, or in all probability ever shall be able to tell—not even M. Villette de Terzé—and we

at least are not sufficiently bitten with the mediæval mania—now so prevalent—as to lapse into humoral pathology. Pass we on, then, to the next idea of the author on variola.

According to the opinion advanced by M. Carnot, that fever which had been denominated "typhoid," he considers to be nothing more or less than small-pox. Typhoid fever should be called "variola interna mesenterica"—"variole interne mesenterique." And the deposit which has been demonstrated as occupying the patches of Peyer in the autopsic examination of those who have died of this disease, the author denominates "tuberculo-varioloid matter." This matter is the matured development of that "innate germ of small-pox" which could not be eliminated from the cutaneous surface, and so, was "cast back" upon the intestinal mucous membrane. Typhoid, then, is "a simple varioloid retrocession."

The question may be asked—Why *had* the innate variolous poison to take the course just described? The answer to this is offered by M. Verdé de Lisle, who, following Carnot, appears to be the author's preceptor in this ingenious school of pathology; it is as follows:—"Vaccine, in exercising its action exclusively upon the skin, *imprisons* in the interior the tuberculo-varioloid matter. This matter cannot, then, burst forth at the cutaneous surface, is carried back upon the intestinal mucous membrane, where it develops itself under the form of 'variola interna mesenterica' (variole interne mesenterique)." But, in order to make this theory complete, we must have *explained how* vaccine *does* shut up the innate germ of small-pox. M. Verdé de Lisle comes again to the author's aid, and tells us, "arrived at the skin" (that is, the innate germ of small-pox in its endeavours to roam abroad, having arrived as far as the skin, its legitimate hall-door!), "meeting the *extremities of the eliminating ducts, obliterated by the action of vaccine*, without being able to overcome this obstacle, the matter is carried back towards the intestines, where one finds it deposited in the crypts of Peyer."

Surely, in the words of our author, slightly changed, we may exclaim, "Il est *impossible* de trouver une!" theorie "plus" curieuse.

Now, all these theories of Verdé de Lisle, which M. de Terzé has been retailing, have been confuted, it appears, in the thesis of "Le jeune candidat," M. Bertin; and as the author proceeds in this relation, he endeavours to answer M. Bertin. In our opinion, he does so by mere assertions. We shall not enter into any lengthened observations upon, or detail of, his line of argument, but merely give the following as

an example. The stubborn fact having been admitted, that typhoid fever may supervene upon the *convalescence* of small-pox, and *vice versâ*, M. Bertin naturally observes that, if these two affections are really of the same nature, a previous attack of typhoid ought to preserve an individual from a subsequent one of variola, and *vice versâ*. M. V. de Lisle thus *effectually* (!) crushes this reasoning:—"When the development of an external variola" (small-pox), "or of an internal variola" (typhoid), "has been *interrupted* in its progress, and that there has been nothing more than a *demi-elimination* of the tuberculo-varioloid matter, *it is not extraordinary* that, under one or the other form, a relapse should be the consequence," and so that question is settled.

Just before we leave it at rest, however, we would beg to insert the following observations from Mr. Simon's excellent Report:—"When masses of vaccinated persons are exposed to the infection of small-pox, if some of them suffer, *do they suffer typhoid fever, or any ulceration, intestinal inflammation, or disturbance?* Here is exactly M. Carnot's postulate, *small-pox infection acting on the vaccinated body;* and the result is among the most extensively and most accurately observed phenomena of clinical medicine. In it there is the utmost possible refutation of M. Carnot. *On his showing there should be typhoid fever.* In fact, there is nothing like it. Under the happy influence of Jenner's discovery, the small-pox is mitigated, perhaps, almost to nothing. A few pustules, rapidly drying up, may alone attest that the once dreadful enemy is working in vain against a protected body. *Of typhoid fever, of intestinal complication, of any other like disturbance, there is literally not a trace.* But, just in proportion as the pustules are few, just in proportion as the protectedness against small-pox has been all but complete, so, in diametrical contrast to M. Carnot's notion, the other sufferings of the patient will be slight, and his convalescence rapid."

Having observed with what ingenuity M. de Terzé endeavours to support M. Verdé de Lisle's theories, we are surprised he did not perform some experiments after the manner of Ceely, with his "matiére tuberculo-variolique," the result of such would be worth waiting for.

We are next informed that vaccine gives rise to tuberculous depositions, whereas variola has the power of detuberculization; but, before coming to the point of his argument on this head, he informs us of the nature of tubercles, their analysis, their microscopic composition, their varieties, and the identity of the scrofulous and tubercular diathesis. Then we come to the

explanation of the manner in which vaccine gives rise to the deposit of tubercle. And here again M. Verdé de Lisle is brought forward, who, after having taken for granted that vaccine exercises its action exclusively upon the skin, says:—"As the cutaneous surface is the only way by which the tuberculous elimination can be brought about, as the small-pox is the only mode of elimination furnished by nature, *it results, that in obliterating this tissue*," "one forces the tubercles to develop themselves upon the internal organs, upon the parts of the system *where the tubercles were primitively placed*." Thus, in the readiest manner possible, we have phthisis converted into pulmonic small-pox.

As a matter of course, then, taking all this for granted, tuberculous diseases must have vastly increased in frequency, especially during early life, since the introduction of vaccination. This fact must be demonstrated arithmetically, and we are therefore given two tables, one by MM. Cousture et Lombard, containing the result of 214 autopsies of children, from the age of one to fifteen years; the other from M. Guersant's registry, containing the result of 357 autopsies of children, whose ages were of similar range to those given by Cousture and Lombard.

Taking the figures of the two tables together, it appears that of the entire 571 autopsies of children, ranging from one to fifteen years of age, in 237, tubercles were found, leaving so many as 334 in whose bodies no deposit was discovered; so that M. de Terzé concludes tubercular diseases in infants has increased since vaccination. "Ou pourra, d'après les tableaux suivant, juger de la fréquence des tubercles chez les enfants DEPUIS *la vaccine*." Why, where is the comparison from which to arrive at such a conclusion? Where are similar tables of autopsies on children of similar ages *previous to the introduction of vaccination?* If M. de Terzé's views, or rather those of Verdé de Lisle, concerning the innate germ of small-pox, shut up by the action of vaccination, &c., be correct, the marvel is, that so many children's bodies as 334 out of 571 were found free from tubercular deposition.

But, "what," says Mr. Simon, "do those writers mean who talk of tubercular diseases being made more frequent by vaccination? Do they mean that vaccination *propagates* from one person to another the developmental peculiarity which I have described? (scrofula with tubercles). They might as well say it communicates a Roman nose or landed estate. Do they mean that in persons or families there is evidence of an *inverse proportion* between small-pox and tubercular diseases? Nothing

of the kind exists. Do they mean that such ingredients of the skin as constitute its susceptibility to small-pox are *transmutable into those elements of blood and lymph which, in scrofulous persons, are blighted into the characteristic substance of tubercle?* All known facts and analogies tell to the contrary. Or do they mean, comparatively speaking, that vaccination belongs to the *circumstances which promote*, and small-pox to the circumstances which impede, the manifestations of the hereditary tendency? Again I say, only let them read the history of small-pox. In respect of these tubercular affections, as of mere scrofulous inflammations previously discussed, let them note that, among recognised developing conditions of both classes of disease, *impoverishing and depressing influences* hold, by common consent, the most considerable place; thus, so far as we know, it is only as an impoverishing and depressing influence that either small-pox or vaccination can be imagined to operate; that all writers on small-pox attest *the frequency with which scrofulous affections follow in its train;* and that in such measure as vaccination is less impoverishing and less depressing than small-pox, in just such measure does the substitution for small-pox act in prevention of scrofula"[a].

In a chapter comprising 30 pages, and headed, "La France Vaccinée," the author endeavours to prove the following propositions:—That the number of marriages has increased in France in a triple proportion to the number of females of proper age to be married. That in less than half a century mortality has doubled amongst those whose ages range between 15 and 30 years. That, in LESS *than a quarter of a century, the proportion of deaths to the sick* has been doubled in *the military hospitals!* That the mortality appertaining to variola has increased since the soldiers have been vaccinated. That typhoid fevers are about six times more fatal with the vaccinated than with the unvaccinated (we wonder why the tuberculo-varioloid matter was forced to retrograde in the latter class!) That the aggravation of the diseases of youth since 1813 is in consequence of vaccination practised upon children since 1800; and that, in less than half a century, the mortality is increased during the period of fecundity with women.

This long list of evils is laid at the door of "variola vaccinia"! No other cause has contributed to the physical degeneration of the people of France; and surely, if M. de Terzé's assertions are true, they must be in a wretched condition! We are to pay no attention to what the "Times" newspaper stated

[a] Parliamentary Report, *ante cit.*

in a recent article bearing upon the subject of the physical deterioration of the French people. Vaccine has done it all! War, conscription, and other potential influences, which we shall here refrain from mentioning, have had no share in this melancholy work of devastation; no, in one word, "la vaccine" has increased the mortality in France.

Now, if this be true, if the practice of vaccination has had this fatal effect upon the inhabitants of France, we should say, as a matter of course, it must have had the same influence upon the inhabitants of other countries who have been equally subjected to the practice.

In order to arrive at a resolution of this question, let us again turn for an instant to that admirable Report of Mr. Simon, where we have a mass of evidence brought forward which should suffice to set the vaccine controversy at rest for ever. We could give several statistical tables from this source, invalidating incontestibly the foregoing conclusions of M. de Terzé; but we content ourselves with a series of three, taken from the "Report of the Faculty of Medicine at Prague to the Minister of the Interior," framed in consequence of the questions forwarded by the British Government.

TABLE I.

SHOWING POPULATION, TOTAL DEATHS, AND DEATHS BY SMALL-POX, DURING SEVEN YEARS BEFORE THE GENERAL INTRODUCTION OF VACCINATION.

Year.	Population.	Deaths.	
		Total Number.	From Small-Pox.
1796	3,003,482	92,242	6,686
1797	2,991,346	86,885	1,988
1798	3,045,926	84,743	3,105
1799	3,041,608	99,079	17,587
1800	3,047,740	110,730	17,077
1801	3,036,481	105,576	3,169
1802	3,111,472	85,460	4,029
Total,	21,278,055	664,685	53,641
Average,	3,039,722$\frac{1}{7}$	94,955	7,663

So that the proportion of deaths generally to the population, previous to the introduction of vaccination, = 1 : 32. The

deaths from small-pox to the population = 1 : 396⅔; and the deaths from small-pox to the total number of deaths = 1 : 12⅓.

TABLE II.

A SIMILAR TABLE, TAKING TWENTY-FOUR YEARS SUBSEQUENT TO THE INTRODUCTION OF VACCINATION.

Year.	Population.	Deaths.	
		Total Number.	From Small-Pox.
1832	3,888,828	139,061	807
1833		121,697	533
1834	3,945,875	122,171	285
1835		122,952	337
1836		124,015	291
1837	4,027,581	141,982	104
1838		108,419	62
1839		121,400	128
1840	4,145,715	118,471	699
1841		116,575	697
1842		124,019	339
1843	4,285,730	142,876	332
1844		113,184	150
1845		178,826	62
1846	4,480,661	132,379	59
1847		134,490	9
1848		141,409	115
1849	4,613,080	131,493	383
1850		176,211	478
1851		133,245	508
1852		134,921	343
1853		124,617	42
1854	4,593,770	124,746	68
1855		(124,746)	64
Total,	33,985,240	3,153,905	6,895
Average,	4,248,155	131,412$\frac{17}{24}$	287$\frac{7}{24}$

So that the proportion of the total number of deaths to the population, during twenty-four years subsequent to the introduction of vaccination, was = 1 : 32⅓. The deaths from small-pox to population = 1 : 14,741⅓; and the deaths from small-pox to total number of deaths = 1 : 457¾.

TABLE III.

VACCINATED AND NON-VACCINATED CASES OF SMALL-POX WHICH TERMINATED FATALLY, ACCORDING TO THE OFFICIAL VACCINATION RETURN (TWENTY-ONE YEARS).

Year.	Cases of Vaccination.	Remaining Non-Vaccinated.	Small-Pox.			
			Cases.		Deaths.	
			Vaccinated.	Non-Vaccinated.	Vaccinated.	Non-Vaccinated.
1835	132,727	4,029	505	430	20	136
1836	130,194	3,319	374	215	26	64
1837	126,123	3,971	57	123	4	52
1838	133,527	3,967	101	96	15	32
1839	132,523	3,906	160	168	20	70
1840	140,898	3,585	1,138	966	89	351
1841	139,471	3,482	1,583	1,522	83	382
1842	142,970	3,180	681	703	39	208
1843	142,314	2,874	627	714	21	229
1844	126,647	6,109	61	148	7	43
1845	149,612	6,410	55	63	2	25
1846	146,467	5,475	6	50	—	7
1847	141,268	5,361	19	25	—	4
1848	132,320	5,718	227	169	17	49
1849	139,523	5,704	575	645	63	177
1850	156,561	6,314	568	374	14	131
1851	152,294	4,694	16	293	3	43
1852	161,364	3,689	252	231	12	65
1853	145,038	3,067	327	168	3	39
1854	161,313	2,927	457	203	7	61
1855	136,424	2,349	389	156	8	56
Total,	3,005,578	90,130	8,178	7,462	423	2,224
Average,	$143,122\frac{16}{21}$	$4,291\frac{19}{21}$	$389\frac{9}{21}$	$355\frac{7}{21}$	$20\frac{3}{21}$	$105\frac{19}{21}$

So that one case of small-pox occurs among $367\frac{2}{3}$ vaccinated, and $12\frac{1}{3}$ non-vaccinated. One fatal case of small-pox occurs among $7166\frac{1}{3}$ vaccinated, and $40\frac{2}{3}$ non-vaccinated. Among cases of small-pox died the nineteenth part of the vaccinated; the third part of the non-vaccinated.

It is unnecessary to state, after the sketch we have given of M. de Terzé's views, the nature of his replies to the "Ques-

tionaire Anglais." They have, however, the merit of being very sweeping. As an example, we shall transcribe his answer to question No. 1:—"*Vaccine, with the view of preservation from small-pox, is now-a-days recognised completely powerless. Long since, this question has been resolved;* it cannot, therefore, give place to further discussion." Now, beneath this extraordinary assertion, let us place the "summing up" of the results obtained from the inquiry instituted by the direction of the British Government. Mr. Simon says:—

"Answers to my fourth and last question are for all practical purposes summaries of opinion on the whole subject. For no person—you may be sure—will recommend the universal practice of vaccination while he doubts its protective influence; nor while (like M. Verdé de Lisle) he regards small-pox as 'a sublime crisis' which it is requisite for human health to undergo: nor while he considers that the success of vaccination, in extinguishing that horrible distemper, must develop other varieties of untimely death; nor even while he believes that, in its ordinary practice by competent persons, there are no risks of casually inoculating other combined infections. To *recommend* that, *except for special reasons in individual cases, vaccination* (skilful, of course) *shall be universally practised,* is to imply that one's mind is made up on all those subjects. And such, you will observe (i.e., by reference to the answers), 'is the recommendation—with only two *personal* exceptions, the unanimous recommendation—of every individual and every government in the series.' Looking, then, to the whole succession of answers, and describing in a few words what to myself has been the effect of perusing them, I would say that, above all, I am struck with their concord."

Surely, then, we may hazard the opinion, that when the Governments of Europe and upwards of five hundred practitioners and professors of medicine, all of whom, we dare say, are as sincere "lovers of truth" as M. de Terzé, have spoken in favour of vaccination—so completely in its favour—his singular views cannot be for a moment entertained. They are, moreover, perfectly untenable, from the fact that what seems to be his premise, viz., that "there exists an innate germ of small-pox," is a mere assertion, unsupported by any proof whatever; and with this as his foundation, he builds up a theory as fanciful as the most extravagant fiction ever imagined by Scheherezade. But—

"In no age of the world have persons, in proportion to their instruction, been readier than now to accept physical marvels, and to modify their conception of natural laws at the bidding of quacks and conjurers. It goes with this credulity to be incredulous of proved truth. Alike in rejecting what is known, and in believing

what is preposterous, the rights of private foolishness assert themselves. It is but the same impotence of judgment which shrinks from embracing what is real, and lavishes itself upon clouds of fictions."

Does M. de Terzé rank with these?

In delivering M. de Terzé's views, we have contrasted such portions of Dr. Simon's Report as particularly bore upon them; to do justice to the latter wonderful production would be impossible in the ordinary limits of a review. The question of vaccination has been opened, and to its fullest extent, by the able Medical Officer of the General Board of Health; and the result, so laboriously arrived at, has been favourable to the practice. The talent which Mr. Simon has brought to bear upon this elaborate Report is of the highest order; and perhaps in the whole range of medical literature there exists not a volume which does more honour to its author, or more strongly stamps him as a man of genius.

(*To be concluded in our next.*)

The Diseases of Children. By Fleetwood Churchill, M. D., &c. Second Edition. Dublin: Fannin and Co, 1858. Fcap. 8vo, pp. 782.

The appearance of a second edition of this compendious treatise is satisfactory proof of the high estimation in which it is held. In our review of the first edition[a] we strongly recommended the work to the notice of the profession, expressing, at the same time, our confident expectation that the stamp of their approval would, in due time, be impressed on it. This prediction has received its fulfilment, and we, therefore, need not say much on the present occasion.

Availing himself of every fresh source of information, Dr. Churchill endeavoured, with his accustomed industry and perseverance, to bring his work up to the present state of medical knowledge on all the subjects of which it treats; and in this endeavour he has, we feel bound to say, been eminently successful. Besides the addition of more than one hundred and thirty pages of matter, we observe that some entirely new and important chapters are introduced, viz., on paralysis, syphilis, phthisis, sclerema, &c., &c. As the work now stands, it is, we

[a] See No. 16, November, 1849.

believe, the most comprehensive treatise in the English language upon the diseases incident to early life. It is needless for us to say more in commendation of this work or of its author. Dr. Churchill's success in medical authorship is hardly surpassed by any contemporary; and the book before us worthily supports his wide-spread fame.

We have no doubt that a third edition of this valuable treatise will by-and-by be called for; and we would venture suggesting to its author—who, to his credit be it told, has shown his willingness to receive a hint, from whatever quarter it may come—the propriety of giving a chapter on the infantile diseases of the generative and urinary organs, such as imperforate hymen, cohesion of the nymphæ, inflammation of the vulva, leucorrhœa, noma, nocturnal incontinence of urine, &c. As all these subjects—the last excepted—are discussed in the author's treatise on the Diseases of Women, this suggestion could be easily carried out. The medico-legal importance of one of these subjects, leucorrhœa, is such that every medical man should be thoroughly acquainted with it, and hence it is specially entitled to a place among the diseases of children.

Transactions of the Pathological Society of London. Vol. VIII. Including the Report of the Proceedings for the Session 1856–57. London: 1857. 8vo, pp. 435.

We do not know any Medical Society, the Proceedings of which are so well and carefully reported as those of the Pathological Society of London. Each succeeding volume improves more and more, both in the value of the several papers, and in the manner in which they are classified and arranged, thereby reflecting the greatest credit on the office-bearers of the Society, especially the Honorary Secretaries. The value of these annual volumes to the medical man engaged in the investigation of any special disease cannot be overrated. He is, by a reference to them, enabled to test the correctness of any new theory which he may imagine that he has discovered,—morbid anatomy being, after all, the only true test of diagnosis. Let us take, for example, a so-called new disease which had nearly obtained for its first describer, Dr. Addison, as high an honour as the discovery of Bright's disease did for his colleague. Our own experience led us from the very first to view this "Bronzing of the Skin" rather as a cutaneous affection than as having a special connexion—an accidental one we admit it to have—with diseased supra-renal capsules.

In the present volume we find seven cases reported in which there was some disease of, or abnormal deposit in, these organs; and in five of them there was no "bronzing of the skin." We merely refer to the subject here as an illustration of the great value of these Transactions in the complete and perfect state in which they are published. No private medical library can be complete without them.

Chemistry of Agriculture. The Food of Plants; including the Composition, Properties, and Adulteration of Manures. By C. A. Cameron, M. D., Professor to the Dublin Chemical Society, &c. Dublin: W. B. Kelly, 1857. Post 8vo. pp. 144.

Dr. Cameron has, in the volume before us, produced a very valuable and readable little book, containing a succinct account of the important aid which chemistry has given to the scientific development of agriculture; containing also an excellent summary of the physiology of the food of plants, that cannot but prove interesting to the medical man. Those of our readers, especially they who, from their position as country practitioners, have the advantage of being able to devote themselves to the fascinating pursuit of the cultivation of the soil, will find it a most useful work, clearly written, and excellently got out. We can most highly recommend it.

PART III.

MEDICAL MISCELLANY.

TRANSACTIONS OF THE ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND[a].

(*Continued from* vol. xxiv. p. 234.)

SESSION 1857–8.

November 4, 1857.

Dr. Montgomery read a paper on the *Reciprocal Sympathies between the uterus and bladder in woman.*

Dr. Smith gave the details of a case of *Hepatic Disease with enlargement of the viscus*, in which colchicum was exhibited as a cholagogue.

Dr. Lees read the notes of a case of *Hysterical Chorea.*

Dr. Mac Swiney made some observations on *Hemorrhage.*

December 2, 1857.

Dr. H. Kennedy made some remarks on a case of *Malignant Disease of the Stomach*, exhibiting the specimen.

Dr. Hague read a paper on *Amylene.*

Dr. Smith gave the details of a case of *Dysmenorrhœa*, in which tincture of iodine was successfully exhibited.

January 6, 1858.

Dr. Hughes read the history of a case of *Angina Pectoris*, which he considered to depend on aortitis, and which proved fatal in a gentleman aged 38.

Dr. Churchill brought forward the following cases:—

"It may be within the recollection of the Society that on two occasions I have brought under its notice cases of ramollissement

[a] These Reports are furnished to us by Dr. Moore, Secretary to the Association.—Ed.

in which the symptoms varied widely from those laid down by the best authorities. The first of these cases (in the Session, 1852-53) was one of ramollissement of the cerebellum, involving considerable amount of deterioration, but in which the only symptoms were headach in paroxysms, vomiting terminating these paroxysms, slow but regular pulse, and, besides these, transient double vision once, and a kind of spasmodic throwing about of the arms; but there was no trace of convulsions, coma, squinting, delirium, or paralysis.

"The second case (June 4, 1856) was one of softening of the brain, in which were found the posterior portion of the great commissure, the fornix, and the septum lucidum, so much softened as to be semi-fluid; and that this softening involved a superficial layer of the corpus striatum, with some opaline effusion into the ventricles; and yet the only marked symptom for a long time was headach. At first there was neither fever, nor disorder of the senses or intellect —no starting, convulsions, or paralysis, nor any continued vomiting, nor constipation; and the voluntary powers and sensations were all perfect.

"I related also a case, published by M. Duparcque, closely resembling my own, in which, for some time, headach was the only prominent symptom. He was quite intelligent, but sensitive to light and sound. The skin was dry and warm; tongue clean; bowels free; pulse 60; and there were neither convulsions nor paralysis. Just before death there were stupor, agitation, and subdelirium. Both the anterior lobes of the brain were softened.

"Now, considering that disorder of the senses, obscuration of the intellect, lesions of sensation and voluntary motion, convulsions, or paralysis, or all or most of these symptoms, have been regarded as pathognomonic of cerebral softening, and almost necessarily concomitant with the disease, I think the Association will agree with me that these three cases possess considerable interest for the practical physician; and, further, that a complaint of severe headach from a child old enough to express his sensations correctly, is a symptom of a most serious character. Both these impressions will be strengthened by the case I shall now lay before you.

"On the evening of September 17, 1857, I was requested by Dr. Price to see Mr. B.'s child, aged 9. During the months of May and June he had suffered from an abscess in his ear, as Dr. Price informed me; but from this he recovered, and was in the country, pretty well, during July and August. On his return to town, about the 2nd of September, he complained of pain in his head, for which purgatives were at first given, and afterwards, as it continued, mercury and chalk, until the gums were affected; a blister was applied to the nape of the neck, and he was removed to Rathmines, September 15. In the afternoon of the 17th he had an imperfect convulsion, from which he recovered speedily. Dr. Price very judiciously applied leeches, and immediately after, I saw him. At that time he had regained consciousness, was perfectly

intelligent, complained of agonizing pain in the head and intolerance of light, but of nothing else. Pulse 90; no vomiting; bowels free; urine passed; no deficiency or inequality of voluntary motion or sensation. He looked very ill, but no change whatever took place in the symptoms for some days; agonizing pain in the head; no convulsion; no paralysis of motion or sensation; no fever. He took food willingly, and slept well. About September 20, the intolerance of light ceased, and the pain in the head gradually declined, but the pulse rose to 120. There was no thirst nor heat of skin, and the sleep was deep and calm. His intellect was intact, and he made no complaint, but he had the aspect of one labouring under most serious disease. Thus matters remained till September 23, when he died calmly and easily, without convulsion or distress, and intelligent to nearly the last.

"On a post-mortem examination, twenty-four hours after death, we found great venous congestion of the membranes of the brain, but no sub-arachnoid effusion. There were two or three ounces of fluid in the ventricles, but no marks of inflammation on the lining membrane. The white matter of the whole of the left hemisphere of the brain was natural in colour and softer than usual; but where it forms the sides and vault of the ventricle it was nearly semi-fluid. There were numerous bloody points, but not in excess. The corpus striatum and optic thalamus were healthy, as was the right hemisphere.

"Now, here we have a child stricken to death with disease of the brain, involving a considerable extent of softening, and the only symptoms were, intolerable headach, intolerance of light, a partial convulsion, and a pulse quicker than natural, and of these the two former disappeared two days before death, without any impaired sensibility. He told us as rationally that his pain was better as he had previously that it was unbearable. Except the once, he had no approach to convulsions; not a trace of paralysis; he answered all questions, though not disposed to talk; he lay quiet; took food and drink; passed urine and fæces voluntarily; and slept well.

"Had I needed it, these two cases would have impressed me with the extreme importance of not undervaluing a complaint of headach on the part of a child old enough to give a true account of his sensations. It was the one symptom, and of such intensity that he used to scream when a paroxysm took place; it was constant, but increased in paroxysms.

"But what is this 'white softening'? That it may be a fault of nutrition as Dr. Todd and others suppose, is very likely, but can we conclude that it is so, without other evidence of defective nutrition? Neither of my cases, certainly, were very robust, but neither were weak or feeble, or badly nourished. And in softening from defective nutrition, the pain does not seem so severe, and they generally terminate with some effusion of blood into the softened part.

"Or in these cases, was it the result of inflammatory action? It is very hard to say, and I would rather solicit the opinion of the Society than advance my own."

"The following case I shall bring forward for the sake of a single symptom only. It is that of a lady about 28 years of age, married, but without children, who came up from the country to consult me for some uterine disorder, and for singular nervous affections of different organs. About six weeks before I saw her, she remarked one morning that there was a curious shade beneath each eye. This gradually developed into a beautiful light cobalt blue, occupying the upper and lower eyelids of both eyes, and then extending across the nose and down to the malar bone of each cheek. It had diminished when I saw her, but still was sufficiently remarkable to attract an unpleasant degree of attention in the street. The colour was a light opaque blue, and as a colour was beautiful, but in that situation was more remarkable than pleasant. I did nothing medically for it, but as her other complaints diminished, it gradually faded, and in two months was barely perceptible."

"The last case is one that occurred last week, and I only mention it as an additional illustration of the value of chloroform in such cases. The lady was in labour of her first child, and as the head passed through the os uteri she had a convulsion, which was repeated two or three times before I saw her in consultation. On examination I found the head low down in the pelvis, with plenty of space, and I was just advising delivery by the forceps under chloroform, when she had another fit. I instantly gave chloroform, which arrested the convulsions and induced sleep, and in five minutes she was delivered without the slightest injury to the perineum. After the placenta was expelled, she had two slight fits, each of which was instantly arrested by chloroform. They have not recurred since."

Dr. Moore read the following case, showing the masked symptoms of *Tape-worm*:—

"Mary H., aged 12 years, a stout, large girl for her age, presented herself at the Institution for the Treatment of Diseases of Children, August 6, 1857. On examination, I found a somewhat peculiar formation of head, narrow anteriorly; pupils much dilated; the head inclined to right side; patient dull and stupid; she complains of stiffness of the cervical muscles of the right side; deafness of the right ear; at times suffers from violent pain in the forehead and temples; occasionally vomits her food. She seems to drag rather than lift her legs whilst walking; she is unable to move the right arm so freely as the left; tongue is furred towards the base; bowels confined; pulse 80.

"From the previous history of this case, I find the patient had a discharge from the right ear about three months ago, which had ceased somewhat suddenly, since which date she thinks the occasional pains in the head have become more severe. She is frequently seized with night terrors, and becomes very excited.

"August 6. From the obstinate state of the bowels, with the furred tongue, I prescribed a powder, composed of calomel and com-

pound jalap powder, to be taken at bed-time, to be followed by a senna draught next morning; patient to have a hot bath at bed-time.

"August 7. The bowels have been freely acted on, although the patient had thrown off the senna draught. As there was no appreciable improvement in other respects, I ordered her six grains of hydrargyrum cum cretâ, and six of antimonial powder, with one of ipecacuanha, of which one was to be taken every night; cold lotions to be applied to the forehead when the pain was excessive; a leech to be applied to each mastoid process.

"August 15. Finding the constipation still obstinate, no diminution of the headachs, and the pupils dilated, I prescribed calomel and rhubarb to be taken, when the bowels required to be freed, directing tartar-emetic ointment to be applied to the nape of the neck, and the patient to take a dessert-spoonful of cod-liver oil twice a day.

"This treatment was persevered in for a fortnight, occasionally renewing the counter-irritation.

"September 4. There is apparent improvement in many respects: the tongue is cleaner; headachs less severe; but pupils dilated much as usual; pulse natural. Continue the treatment as before, substituting syrup of iodide of iron for the cod-liver oil, as she was tired of the latter. This case went on much as I have described: occasional interludes, with sudden accessions of the stupidity; deafness, violent headachs, till 15th September, when again she came to me, complaining of obstinate constipation of the bowels. I had repeatedly asked after the character of the discharges from the bowels, and if any worms had been passed, and was always answered in the negative; however, I felt ill at ease on this point, and the bowels requiring to be freely acted on, I prescribed a powder composed of calomel, compound jalap powder, and scammony, to be followed the next morning with a black draught, when she passed a tape-worm about a foot long.

"On the 19th, the same powder was repeated, and another worm, or portion of the same, came away, and from this date all the formidable cerebral symptoms I have enumerated vanished. The stiffness and tension of the cervical muscles of the right side remained for some time, but these were relieved by the compound soap liniment with opium. I have repeatedly seen this girl since, looking rosy and gay.

"In the early stage of this case I confess my diagnosis was quite at fault. The general appearance of the patient, coupled with the somewhat peculiar formation of head, and ottorrhœa having existed, and having suddenly ceased, induced me to suspect tubercular or some subacute form of cerebral disease. The event showed how far I was mistaken. And here it might not be out of place to make a few cursory remarks on the anthelmintics in daily use. It would be needless to enumerate the majority of them, and the objections which may be fairly urged against the exhibition of many of them. In the kousso we have a valuable addition to this class of medicines, which is not only useful in expelling tape-worms, but as a general

vermifuge. About the specific effects of this agent, I lately received the following communication:—My correspondent writes:—'I was very much troubled with these gentlemen (ascarides), and was nearly set mad by the medicines I got to cure them: turpentine, fern oil, &c.; by chance I heard of kousso, and after a deal of trouble I succeeded in getting some of it; I took it, and it seemed as if I had not taken any medicine, but it had the desired effect, and I got rid of them for nine months, when, after repeating the dose, I found they disappeared as before. Those gentlemen who attacked me were a small white kind, and appeared in dozens at a time, &c., &c.'

"The great objection against the use of the kousso is the cumbrous character of the dose, but I think in the kameela we have this serious objection obviated; whilst from the detailed experience of it, as far as it has been tried in the removal of tape-worm, it eclipses all other anthelmintics. Dr. Giraud, of Grant's Medical College, Bombay, writing of it, says:—'It is used as a vermifuge in Bengal, for tape-worm, for which it is successful after turpentine and kousso have failed. Dr. Simpson's (Bengal army) experience of it corroborates this statement: he considers it quite a specific for the expulsion of tape-worm.

"*Rottlera tinctorea*, is a plant of the Euphorbiaceæ, found in the hilly parts of India, along the base of the Himalayas, from Assam to near Peshawur, in Central India; at the Northern Circars, in Mysore, and at Parrell Hill, near Bombay. In its habit it is almost arborescent, growing to twenty or thirty feet high[a]. This substance, called *kameela*, which is obtained by brushing the powder off the capsules of this plant, has been long known in India as a dye; it is also occasionally used by the natives as a vermifuge; this latter property is supposed by Dr. Royle to depend upon the stellate hairs found in the powder. Dr. Anderson's attention was first called to it by Dr. Gordon, of the 10th regiment, who had met with great success in employing it as a remedy for tape-worm. Dr. Anderson employed it very successfully.

"The powder is of a brick-red colour, with a peculiar heavy odour, increased by its being rubbed between the fingers. Its physiological action is very simple: on an adult, the powder in the dose of two drachms to half an ounce besides purging, very often causes nausea and vomiting, and in some cases griping; its action on the bowels is variable, producing from four to ten or fifteen stools even when a dose of three ounces has been administered. A strong ethereal or alcoholic tincture, besides acting more mildly, is followed by more uniform effects. Dr. Anderson found a dose of the tincture sufficient to produce the full anthelmintic effect of the drug; it was never followed by more than six stools, and always acted without griping. After three drachms of the powder have been administered, the worm is usually expelled in the third or fourth stool. It is generally passed entire, and almost always dead; and in about

[a] British and Medico-Chirurgical Review.

fifteen cases Dr. Anderson was unable to detect the head. The vermifuge properties of *Rottlera tinctorea* have been attested in a large number of cases. Dr. M'Kinnon has mentioned sixteen successful cases in a paper published by him; he has since administered it in powder to nearly thirty patients, out of whom there were only two cases in which no worm was expelled. Dr. Gordon has tried the remedy in thirty cases of tape-worm, with uniform success.

"The dose of the powder of the 'kameela' which seems to act most satisfactorily is two and a half to three drachms in an adult; and half an ounce of the alcoholic tincture is the dose which is followed by the most successful effects.

"It is more than a year since I first heard of this valuable agent from Dr. Benjamin Simpson, of the Bengal army, at which date I am not aware that it had ever been introduced into this country. Certainly it was not obtainable either here or in London. In May last, Dr. Beatty kindly sent me some of the powder from Bombay, and I since received a further supply. I recently published some cases, in the Dublin Hospital Gazette, of its value as a local application in herpes, and I have exhibited it as an anthelmintic when opportunity offered, in hopes ere long to lay my experience of it before the profession. I prescribed it in the case I have just mentioned in half-drachm doses, but from an unavoidable occurrence I was not in a position to do so till after the expulsion of the second worm; it excited nausea, and purged four or five times, but no worm was expelled, as I fear the 'steed had been stolen' previous to its exhibition."

Dr. Moore also brought before the Association a specimen of the *Ferri sulphas cum saccharo*, prepared by Messrs. Oldham & Co., of Dublin, after the formula of M. E. Latour, Pharmacien Aide-major, who states that sugar in combination with the protosulphate prevents chemical alteration. The salt is prepared thus:—200 parts of pure protosulphate of iron are dissolved in 100 parts of distilled boiling water; 50 parts of crystallized sugar are also dissolved in 30 parts of boiling distilled water. On mixing the liquors, and rapidly filtering, crystals are deposited between 95° and 100° Fahr. The crystals, collected and dried between folds of blotting-paper, should be preserved in a dry bottle. By concentration a fresh quantity of this salt may be obtained. The crystals are oblique rhombic prisms, having the composition—

Protosulphate of iron, ...	54·57
Water, ...	32·50
Sugar, ...	12·93
	100·00"

Dr. Moore continued:—"I have lately availed myself of frequent opportunities of prescribing this protosalt of iron, and con-

sider its increased palatability an important desideratum in the treatment of young persons and children. It is especially indicated during the convalescence from remittent fever, at present so prevalent, when there is a tendency to a relaxed state of the bowels. Dr. Hardy's experience of it in cases of fastidious females is very favourable, the metallic acridity of the sulphate is blunted by the sugar, and renders it easily borne. Dose for an adult, from one to five grains; for children, one quarter to one grain."

Dr. Smith showed a very pure specimen of the *Ferri sulphas granulatum* of the Dublin Pharmacopœia.

TRANSACTIONS OF THE COUNTY AND CITY OF CORK MEDICAL AND SURGICAL SOCIETY[a].

(*Continued from* vol. xxiv. p. 246.)

SESSION 1857–58.

First Meeting, October 15, 1857.

Dr. R. Corbett, President, in the Chair.

The President, Dr. R. Corbett, opened the Session with an introductory address; after which—

Professor Harvey exhibited a very interesting example of fatty degeneration of the placenta. In the case from which it was taken, labour came on about the end of the eighth month; the child, which was living, was rather small, but in other respects was well nourished; the placenta itself came away readily, there being no adhesion whatever to the uterus.

The following paper was then brought forward by Thomas Gregg, M.D., Surgeon to the South Infirmary, Cork:—

Case of Subclavian Aneurism.—Denis Kinealy, aged 40, of the sanguine temperament, about 5 feet 9 inches in height, slightly made, formerly a soldier in the Queen of Spain's service, of dissipated habits; since then he was employed as a labourer, and lately occupied as a porter in a tobacconist's shop, presented himself as an external patient to the South Infirmary, Cork, 29th July, 1857. Complaining at present, and for the three previous months, of an intense burning pain in the right shoulder and arm, accompanied by numbness, which he attributed to rheumatism, and for which he had been treated. This pain, he states, was moderate in the daytime, but considerably aggravated at night, so much so as frequently to deprive him of sleep, and oblige him to throw himself out of the

[a] These Reports have been furnished to us by Dr. S. Henry Hobart, Secretary to the Society.—Ed.

bed; he says he had not been subjected (so as to account for this) to any severe labour, such as carrying heavy loads, but that his occupation exposed him to wet and cold, without the opportunity of changing his wet clothing; about a fortnight after the commencement of the pain he observed a small tumour under the centre of the right clavicle, gradually increasing in size up to the present, at the same time varying much according to position.

On examination, a large pulsating tumour was found extending from under the external two-thirds of the clavicle (which was elevated about an inch), down into the axilla, the anterior half of which it nearly occupied. On placing the hand over the tumour, the *frémissement cataire* was very perceptibly felt, and on auscultation the *bruit de soufflet* was distinctly audible. The anterior portion of the right subclavicular region was perfectly clear on auscultation and percussion; but the inferior part of the right mammary region, extending from the nipple downwards, was particularly dull, and the sounds of the heart were conveyed as if through a solid body; the left side was perfectly clear, presenting nothing abnormal; there was a slight bruit distinguishable in the cardiac region, but this appeared to be a reflected sound from the aneurismal sac, otherwise the heart's action seemed natural; the pulse at this time was quick and strong, the tongue slightly loaded, bowels constipated: this was relieved by a mild aperient; small doses of tincture of digitalis, three times daily, were also ordered to regulate the heart's action, and an anodyne at night, in consequence of great restlessness and slight delirium; this treatment was continued some days. On the 7th August a consultation, consisting of the medical and surgical staff of both hospitals, together with some of the principal leading practitioners of the city, was held, for the purpose of deliberating on the propriety of operation, which was determined on by a large majority of those present as the only chance of affording relief; it was also then agreed that there was sufficient space of the artery healthy to enable it to be tied in the commencement of the third stage of its course. Every arrangement having been completed, the operation was commenced; there was considerable difficulty experienced in finding the vessel, owing to the displacement of the clavicle and the other parts by the tumour; the right lung and pleura were also considerably pushed up, the cause of which will be fully explained in the post-mortem examination; these, along with debility of the patient from nervous excitement, rendered the operation more tedious than it otherwise would have been; however, after the division of some enlarged branches of arteries requiring ligatures, the subclavian was tied, as evidenced by the immediate cessation of pulsation in the tumour pending the operation; while separating with the finger the areolar tissue, so as to expose the artery, a gurgling sound, as of the suction of air either into a large vein or the pleura, was heard, but almost immediately ceased. On visiting in the evening the patient seemed to be progressing favourably, had slept a little, no pain in either the region of the tumour or limb, which was of natural temperature,

having been enveloped in a flannel roller. He was ordered a pill composed of calomel, tartar emetic, and powdered opium, at bed-time.

August 8th. 10 o'clock, A.M. Slept badly, and had some slight delirium during the night; bowels had not acted; tongue furred; respiration 83; pulse 136; has some cough; roughness of respiration, but no direct symptoms of pneumonic inflammation; size of tumour rather less; limb natural. He was ordered an emollient enema immediately; and calomel, 2 grains; powdered opium, half a grain; to be made into pills, one every third hour. Saline mixture, 1 ounce, every second hour. 4 o'clock P.M. Pulse 124; respiration as morning; bowels relieved by enema; abdomen tympanitic: slight crepitus on anterior and left side of chest; cough not urgent; skin moist. Ordered immediately a terebinthinate enema, with assafœtida; the pills to be continued. 8 o'clock P.M. Pulse 128, small and feeble; abdomen less tympanitic; crepitus variable; bronchial breathing on right side; temperature of right arm natural. He was ordered beef-tea, a wineglassful, and arrow-root *ad libitum;* during the night the pill to be taken every second in place of every third hour; and as the pneumonic symptoms seemed to be rapidly increasing, it was deemed advisable to place strong mercurial ointment in either axilla, so as to try and bring him quickly under the influence of the mercury.

August 9th. 10 o'clock A.M. Slept badly; gums slightly affected by the mercury; tongue moist; pulse 126, and feeble; respiration 38, puerile on left side, with some crepitus; much clearer on right side on percussion, and admitting more air. There has been retention of urine since last evening; catheter introduced, and about a pint of urine drawn off. Wound healthy. Omit last pills, and ordered calomel, 2 grains every sixth hour; and an aromatic mixture, with tincture of opium, 1 drachm to 8 oz., to take 1 oz. every third hour; beef-tea, 6 oz. per day; arrow-root *ad libitum.* 8 o'clock P.M. Slept at intervals during the day, but says he does not feel so well. Considerable diaphoresis. Objects to the aromatic mixture, which he says produces nausea. Dulness on percussion increased on right side, with crepitus and bronchial breathing; also some crepitus on left side. Abdomen very tympanitic; catheter obliged to be again introduced; pulse and respiration same as morning; tongue loaded. Right side to be dry cupped, afterwards terebinthinate fomentations over chest and abdomen. Repeat the terebinthinate enema with assafœtida; omit last pills; ordered calomel, 1 grain, powdered opium, half a grain, every fourth hour; to continue beef-tea and arrow-root.

August 10th. 10 o'clock A.M. Had a good deal of sleep during the night, about four hours altogether. Countenance more cheerful; passed urine freely during the night; bowels well relieved by enema, which brought down a quantity of flatus; abdomen soft and relaxed; tongue moist and cleaning; pulse 120; respirations 34; crepitus much less on both sides. Medicines as before. 8 o'clock P.M. Spent the day quietly and well; had a tolerable amount of sleep; pulse 120; crepitus less on right side, none on left; abdomen soft;

passed urine freely; little or no cough, but there is some loose bronchial mucus, which annoys him, and which he expressed his fear of coughing up, for fear of the wound, but which he did during the visit, and which appeared natural. Medicines as before.

August 11th. 10 o'clock A.M. Spent a very restless night, and had a great deal of delirium. Respiration much hurried and irregular; pulse 120; tongue cleaning; bladder acting freely; abdomen again tympanitic; bowels not relieved since the evening of the 9th; wound looks healthy on being dressed; the sutures were removed this day. Omit pills. To have a draught of castor-oil immediately; the fetid enema to be repeated if necessary. A blister to each side for six hours. Beef-tea to be continued. 9 o'clock P.M. Spent the day pretty well; countenance cheerful; diaphoresis persistent; tongue moist, cleaning; pulse 110; respiration still irregular; dulness on percussion much less on right side, and vesicular murmur increased in extent; slight bronchial rale on left side. Enema was administered at 4 o'clock, which acted four times with much relief. Abdomen soft. Ordered a draught with tincture of opium, half a drachm, and dilute sulphuric acid, 10 minims, immediately; and a draught with 15 drops of tincture of opium after three hours, if sleep should not supervene. A wine-glass of beef-tea every third hour.

August 12th. 10 o'clock A.M. Spent a very good night, and seems much improved; bowels acted twice during the night; right lung quite clear on percussion for some distance below the nipple; vesicular murmur perfectly audible throughout both lungs; no crepitus; diaphoresis profuse; pulse soft and compressible, ranging from 104 to 108; tongue cleaning; catheter again required. Repeat the anodyne draught at mid-day. To take two large spoonfuls of mixture of sulphuric acid thrice a day. 8 o'clock P.M. Slept well, and passed water freely during the day; diaphoresis much less; pulse 100, soft. Repeat the draught and the other medicines.

August 13th. 10 o'clock A.M. Did not sleep so well last night, which he attributed to severe pain in the left knee. On examination, there were redness and slight puffiness of the joint over and at either side of the patella, very tender to the touch; pulse 96; respiration natural; tongue clean; diaphoresis much lessened; wound has commenced to suppurate, and looks healthy; sac solid, and much diminished in size; bowels confined; abdomen tympanitic. This sudden accession of pain in the knee-joint gave us some uneasiness at first, fearing it might be a symptom of pyemia. However, considering the amendment in every particular up to the present—a soft pulse, considerably diminished in frequency, a perfectly clean, moist tongue—it was thought to be more arthritic, and, more than probable, produced by the great diaphoresis. He was ordered a terebinthinate enema with assafœtida, immediately. An anodyne to be given after; opiate fomentations to the knee, covered with oiled silk; poultice to the wound. 8 o'clock P.M. Enema acted twice, and he rested quietly up to 5 o'clock, when

a marked change took place; he became exceedingly restless and delirious, exhibiting all the delusions of delirium tremens. Pending this attack he passed two involuntary stools, and violently and frequently flung the affected arm out of the bed. He also had a chill, not amounting to a rigor, afterwards becoming hot and flushed. He is unwilling to raise the affected knee from the bed. Pulse 112; respirations 48, and abdominal; tongue still clean and moist. Ordered an anodyne draught with half a drachm of tincture of opium, immediately; and to be repeated, with 15 minims of tincture of opium, if sleep do not supervene.

August 14th. 10 o'clock A.M. Slept pretty well last night, and did not require the second draught; delirium subsided; some slight bleeding from the wound of a venous character; pulse 108; respiration more regular; tongue clean. Appears still under the influence of the anodyne; easily roused, but immediately drops off to sleep after answering any questions, and which he does perfectly rationally. Ordered a draught with 15 minims of tincture of opium, if necessary; water-dressing to wound. 8 o'clock P.M. Spent the day quietly; pulse 104; no further tendency to hemorrhage; bowels not relieved during the day. Ordered, a draught containing 20 minims of tincture of opium, at bed-time, if necessary.

August 15th. 10 o'clock A.M. Spent a very restless night, but had some sleep at intervals; pulse 104; respiration hurried and laboured, evidently from the distended state of the abdomen; the bowels not relieved since last report; tongue still clean and moist. Ordered, compound colocynth pill, and assafœtida, 55 grains of each, in two pills, immediately, with a draught containing 20 minims of tincture of opium. 8 o'clock, P.M. Very restless all day; pills acted three times; abdomen still very considerably distended; pulse 120; respiration very hurried; slight ichorous discharge from wound. Ordered a draught with half a drachm of tincture of opium, immediately; terebinthinate fomentations to the whole abdomen. He continued, notwithstanding the anodyne, exceedingly restless up to half-past 12 o'clock, when there was a sudden gush of from sixteen to twenty ounces of arterial blood from the wound; this hemorrhage almost immediately ceased; lint soaked in a saturated solution of alum was applied to the wound, and pressure kept up by the hand in consequence of some oozing of blood, whereby a clot was formed; however, there was a recurrence of hemorrhage at 2 o'clock A.M. of the 16th; the amount of blood was not so great as in the first instance; pulse became very small and rapid, the breathing stertorous, and he was almost in a state of insensibility; from this state he recovered in some degree, and when visited at 10 o'clock A.M. he appeared more tranquil; he was able to speak quite collectedly; pulse very rapid and thready; countenance pale and collapsed; tongue dry. He was now ordered a dessert-spoonful of wine in water at intervals, which was continued during the day; and although he had taken six ounces altogether up to the evening visit, no sensible impression was made on the pulse; when, in addition, he was

ordered a draught containing twenty minims of tincture of opium; but he continued exceedingly restless up to 1 o'clock A.M. of the 17th, when he sank from exhaustion, although there was no further hemorrhage.

Autopsy, twelve hours after death.—Nothing peculiar exhibited itself on the external surface of the body; rigor mortis well marked; in order to bring the contents of the thorax and aneurismal tumour into view, an incision was made from the chin to the ensiform cartilage; the integument and muscles at both sides reflected back, particularly on the right side, so as fully to expose the sac, which was covered over by both pectoral muscles, and intimately united with the four first ribs, and extending from their junction with the cartilages about four inches backwards; the ribs were next sawn through near their posterior extremities, and removed, except those connected with the tumour, along with the sternum; the caliber of the thorax was very much diminished from above downwards, the diaphragm being much more convex than natural, pushed up by the liver on the right side, which was considerably hypertrophied, weighing about 8 lbs., and extending as high as the lower margin of the fourth rib, and in the centre by the stomach and intestines, which were enormously distended with gas; the size of the liver would fully acount for the dulness and want of respiration during life on the right side, and which was before alluded to; there was some serum in the right pleural cavity, and engorgement at the base of the right lung; otherwise the lungs at both sides were healthy, and crepitated very freely, with the exception of two or three tuberculous spots on the anterior surface of the left lung, and a small quantity of coagulable lymph on the free margin of both lungs; the upper part of the right pleura was also carefully examined, but no appearance of wound could be detected. All the parts were matted together from the necessary inflammation for the healing of the external wound. The pericardium was healthy, and occupied its natural position, on opening which there was no abnormal quantity of serum found; the heart was slightly hypertrophied, but not more than what could be expected, considering the size of the liver, and the increased duty in having to fill so large an aneurismal tumour; there was some fat deposited on its external surface; this, along with the lungs, aorta, subclavian and carotid arteries, with the tumour and right axillary artery, were all carefully removed for further examination. On doing this, a large abscess, containing about six ounces of dark, badly formed pus, was discovered extending from the internal edge of the wound downwards and backwards under the trachea and arch of the aorta to the right side of the bodies of the second and third dorsal vertebræ, external to the pleural cavity. The heart was next opened; the valves were found perfectly healthy, and nothing abnormal discovered in connexion with the lining membrane. The aorta was natural in size, as well as the innominata; the internal lining membrane of the

latter presented some slight traces of atheromatous deposit. Upon opening and tracing the right subclavian to the disease, a firm coagulum was found, filling the cardiac side, about an inch in length, close to the ligature, which had not completely cut through the artery; the coagulum was very firmly adherent to the coats of the artery, so that it was difficult to ascertain where the hemorrhage proceeded from; but the internal mammary artery opened at the distal side of the ligature, and may, from its free anastomosis, have been the source of the hemorrhage. All the other arteries were perfectly normal. The tumour contained about twelve ounces of black, semi-fluid, decomposing blood; a firm coagulum, about the size of a walnut, occupied the opening of the artery into the sac, which was evidently of recent formation, and prevented the possibility of any fluid passing from the artery into the tumour.

The details have been thus minute, as the case was most interesting, from the combination of other organic affections requiring special treatment. Why pneumonia should have shown itself was totally unaccountable. However, the necessary exhibition of mercury did not, as is usually supposed, prevent the proper formation of fibrine, as the clot formed was so firm and adherent that, had there been union in the coats of the vessels, the cure would have been complete.

October 28, 1857.

Dr. Corbett, President, in the Chair.

Mr. Sandham exhibited the uterus of a young woman who died on the 26th instant, in her second confinement, and gave the following history:—

"Mrs. M., aged 30, was for some hours in labour before the waters broke, and when this took place the right hand presented, and was immediately expelled. The midwife called for assistance, and I was sent for; but not being at home, Dr. M'Evers saw her in some time after, and ordered her to the Lying-in Hospital, where she was conveyed in a gingle, and there died, a very short time after admission, without any interference with a view to delivery. Before being *waked*, the mother of the young woman sent for me to remove the child. On opening the peritoneum a considerable quantity of sero-sanguineous fluid escaped; when the uterus was opened, the fœtus lay across the pelvis, the head occupying the left iliac fossa, the side of the cranium pressed firmly against the linea ilio pectinea of the same side, while the breech was pressed into and against the opposite fossa and pelvic brim, the right hand appearing externally and occupying the vagina. There must have been very powerful uterine action, as it required some little force to disengage the child from its position. I removed the uterus, and its state under such circumstances may now be seen. You see the portions of the uterus against which the head and breech pressed are livid, bruised, and softened, and considerable extravasation evident;

and the serous surface at the breech side rubbed and fretted from friction. The internal uterine surface presents nothing very remarkable except at the spot where the breech rested. You there see it is partially lacerated or torn through, to the extent of about three inches, showing that, had uterine action continued much longer, complete rupture should ensue at this part. This state of the organ shows that, were the woman delivered by the operation of version or decapitation at least a short time before dying, nine chances to ten but she would have died of subsequent uterine disease. This case, like many others constantly met with, proves the bad results likely to follow through the ignorance of the woman conducting the case; for certainly, had an accoucheur seen this young woman in time, the life, not only of the woman, but perhaps of the child, would have been preserved. This case, then, teaches the necessity for early and judicious interference on the part of the obstetrician, before the uterus becomes thus injured and the powers of life exhausted. The probable cause of death in this case was peritoneal inflammation."

Case of Pneumothorax following Pneumonia. By Professor O'Connor.—James Canty, aged 51 years, a labourer, was admitted into the Mercy Hospital, May 26, 1857, labouring under pneumonic solidification of the lower half of the right lung—all symptoms of inflammation having previously subsided. After having been submitted to a course of mercurial treatment, with counter-irritants, he was dismissed the hospital on the 8th of June, apparently free from disease, except that he still suffered from a slight cough.

Re-admitted on the 11th June; states that on the previous day, whilst coughing, he was seized with sudden pain in the right side, and a difficulty of breathing so great that he thought it would speedily terminate his life.

On examination, the part of the chest which was previously the seat of pneumonia now elicited amphoric resonance on percussion, with the *bruit de pot felè*, in a very marked manner, extending over a space of about four inches square. There was no amphoric resonance of the voice or of the breathing; he labours under great dyspnœa; cannot retain the recumbent posture for the shortest period; countenance expressive of great anxiety; pulse quick and feeble; great pain over right side, increased on inspiration or coughing. Treatment: pectoral mixture, 8 ounces; tartar emetic, 4 grains; a large spoonful every hour. The debility was too great to bleed or leech.

June 13th. Pulse became slower and more regular under the use of tartar emetic; dyspnœa less, but pain still continues. Eighteen leeches to be applied to the affected part.

14th. States that he has been greatly relieved by the leeches, which bled profusely. Amphoric resonance of the voice heard on examination, and amphoric breathing, a slight splash on percussion indicating the presence of both air and fluid. The absence of these

signs on the first day may be accounted for by the feebleness of the respiration. The tartar emetic mixture continued.

15th. Physical signs as on 13th; pulse 88, regular; tongue clean; breathing moderate; countenance tranquil; no pain in chest, with exception of slight soreness near the right mamma; cough greatly diminished.

18th. No change in the physical signs, but marked improvement in the general symptoms.

The symptoms continued nearly the same till the 22nd, when the amphoric resonance of the voice entirely disappeared, and the amphoric breathing was scarcely perceptible, at intervals disappearing altogether. The percussion sound was natural over the entire lung, but very sharp pleuritic pain arose in the seat of the disease, which was attributed to the union of the costal and pulmonary pleura after the absorption of the effused fluid. A blister was applied, and small doses of blue pill and opium given.

On the 25th the patient was in perfect health, and the closest examination did not discover any symptom of disease in the lung.

Professor O'Connor made the following remarks on the symptoms and treatment of the case—"In explanation of the treatment adopted, I have to observe that I gave tartar emetic for the purpose of rendering the action of the heart more tranquil, dreading, in his apparent exhaustion, the effects of even a few leeches. The beneficial effect of the treatment by leeching on a subsequent day showed that the debility was only apparent, consequent on the dilated state of the right auricle, this again depending on the quantity of lung in a state of collapse. After the first few days the case did not require any variety in treatment until towards its termination, when the existence of pleuritic pains called for the application of a blister, and some doses of calomel and opium. The pains existing at this time I attributed to the union and adhesion of the pleural surfaces, previously separated both by fluid and air. In most cases of pleuritis I have found this stage, next to the origin of the disease, to be the most painful. The next point of inquiry is to determine the cause of the pneumothorax in this case. Before stating my opinion, I may be permitted to say a few words on the mode of production of pneumothorax generally, than which there is no point in pathology more unsettled. Discarding all investigations prior to Laennec, we find this distinguished writer speaking of idiopathic pneumothorax as of common occurrence, and reciting several cases in illustration of his views. I confess that a perusal of these cases does not carry as much of conviction to my mind as most of his writings. The recognition of disease merely by clear percussion sound and absence of respiration would scarcely be deemed sufficient at the present day; and his statement that *tintement metallique* is always heard in case of a fistulous opening from the bronchi into the pleura, is not borne out by recent observations. In all his cases, where a post-mortem examination was performed, the lung was greatly collapsed, and a very small opening may have been en-

tirely closed up by the collapse of the lung, and thereby escaped observation. A case of this kind was already exhibited to the Society, where the communication was so small that I did not discover it till after several days' maceration of the lung. Since Laennec's time these investigations have been made with greater care, and accordingly, fewer, if any, well-authenticated cases of pneumothorax have been found. Andral only found one, and in the later editions of his work he doubts the accuracy of the opinion he had formed in this case; and states that 'in all the cases of pneumothorax that he had seen, the existence of a gas in the cavity of the pleura was the result of the existence of a pulmonary fistula.' Dr. Houghton, in a clever article in the Cyclopædia of Practical Medicine, lays it down as a rule, that where pneumothorax exists the air has been introduced from without. Hasse states it as his opinion, that further evidence is required 'touching the possibility of effused fluids becoming decomposed, and giving rise to the development of gases within the shut sac of the pleura.' It may be also stated, that Laennec founds his opinion in part on the fact, that gaseous emanations arose from the pleura in many cases when opened after death; but this might have been the result of putrefactive decomposition. Rokitanski, on the other hand, looks on air in the pleura as a product of inflammation, though extremely rare. Dr. Walshe states a similar opinion, but only supported by two cases of Dr. Graves (the conclusiveness of which may well be called in question, notwithstanding his deservedly high reputation); and one case in his own practice, in which he says the presence of air in the pleura was the only plausible explanation of clear percussion sound over a lung in a state of pneumonic solidification. The evidence afforded by cases like these, in which an opportunity was not afforded for a post-mortem examination, is rendered still less conclusive by the admitted fact that pneumonic solidification may emit a clear sound from other causes than the presence of air in the pleura; as, for instance, the tympanitic sound of the stomach or intestines conveyed by the solidified lung. A remarkable instance of this came very recently under my notice, in the case of a lady on whom I have been in attendance for some months, labouring under pleuritic effusion of the left side, with solidification of the lung (the latter disease being the only one then present). When percussing the lower part of the affected lung posteriorly, a few days since, the patient remarked that she had not on any previous day heard a similar sound to that which was then elicited; and this was true, for it was perfectly amphoric. On placing my ear over the part I found no change in the respiratory murmur, which was usually feeble, but audible. I then percussed over the left hypochondrium, and found a sound similar in character, which I believed was that conveyed through the solidified lung. I gave some aperient medicine, which removed the tympanitic state of the abdomen, and with it disappeared the amphoric character of the percussion sound over the lung. I have been diffuse in stating the arguments for and against the possibility,

or rather probability, of idiopathic pneumothorax, in order to establish the high probability that a temporary communication existed in the case just related between the bronchi and pleura; and that there was subsequent absorption of the air and fluid effused, though the recovery of such cases is extremely rare.

"The disease arose after an attack of pneumonia of more than ordinary duration, and which might have left some small point of suppuration in the lung; the bursting of which into the pleura during a fit of coughing would readily account for the symptoms. That the entire lung was not collapsed, as usual in such cases, might be explained by adhesion between the surfaces of the pleura taking place in the previous inflammation. If there was no other symptom of pneumothorax in this case but tympanitic percussion sound, its cause might still remain in obscurity; but the amphoric resonance of the voice on a subsequent day, in my mind, removes it from that class of cases which every day's experience renders more problematical, namely, idiopathic pneumothorax."

The PRESIDENT then read the following paper:—

"From experience we would naturally conclude that violence done to the abdomen, and more especially such violence as would rupture the coverings of that important cavity of the body, and permit the protrusion of the larger portion of its contents, would, to say the least, be likely to produce symptoms which would require the most active measures to counteract their ill effects. Cooper, in the Surgical Dictionary, says, writing on wounds of the abdomen, 'In the treatment, the most necessary thing is to prevent and oppose this perilous affliction, inflammation of the peritoneum.' He then describes the usual remedies. Few of us, who know the hazards attendant on peritonitis in its simplest form, could expect where there was exposure of the peritoneum itself, together with laceration of it, and its consequences, other than a fatal termination. However, the cases which I am about to introduce to the Association will prove that very severe abdominal injury will sometimes, without any active treatment being called for, recover. I confess that, at the period of my attendance (and most anxious it was in each) on those cases, I had scarcely hope that life would have been preserved in either; I looked forward, at all events, to the probability of the most active measures being called for, from the symptoms which I considered would unavoidably arise. In neither of the cases did I suspect, and as it proved, was there cause for suspicion, of injury of the intestine. Cooper, in his Dictionary (to which I would beg to refer the members for an interesting article on wounds of the abdomen), says:—'It is well known that wounds, at first attended with alarming symptoms, frequently have a favourable termination.' Now, the cases which I am about very briefly to relate did not present any 'alarming symptoms,' and it is from this simple fact that I consider them at all worthy of notice. How far the occupation and habits of the sufferers may have tended to obviate the 'alarm-

ing symptoms' which I most certainly prognosticated, I cannot say, but it is probable their simple mode of life—nay, their poverty, may have been a chief cause of their immunity from suffering what those of the higher classes, under similar circumstances, might have done. With these few hurried observations, I shall now proceed to detail the cases in order, as they occurred. I present them to you as nothing novel, but, having fallen under my own immediate care, I can vouch for their accuracy, and they may probably prove interesting to some of my younger brethren, if such accidents should happen to call for their assistance. The recovery of the first case, and in a man so advanced in life, together with the circumstances attending it, is almost beyond credibility, and I am free to confess that, if I heard it related as I am now about to give it to you, I should be almost incredulous. There are, however, many living witnesses of the fact to whom I could appeal if necessary.

"Thomas Walsh, aged 70, residing in a wretched hovel, while in the act of removing the old thatch off its roof with a view to its being repaired, fell between the rafters, and in his descent was caught by a hook in one of the latter, close to the crista ilii of the left side, and the whole of the abdominal integuments were obliquely torn up to the right hypochondrium. He was, after the lapse of more than an hour, accidentally discovered by one of his neighbours, lying on his face and hands in the midst of the sooty straw which he had thrown down into the interior of the cabin. He was sensible, but unable to move from the position. When turned on his back, the fearful extent of the injury which he had sustained presented itself: a large ragged wound, through which protruded almost the whole of the intestines, which hung down to his knees, and were covered with adherent soot and straw. I was sent for, but not told the extent of mischief; and, on my arrival, I found the clergyman with the patient, who on retiring from the poor man, said it was impossible that he could live many minutes. I was unprepared, and on finding the wretched plight of the sufferer, I proposed to ride home again, a distance of two miles, and bring everything necessary to set matters to rights, if possible. I stipulated that, if fatality occurred during my absence, a messenger should be sent to inform me. I was just about to start from my house when a friend of the patient told me he was dead, which did not at all surprise me. However, on the following morning, when visiting a short distance from his residence, I met a man whom I knew, and I said, 'Well, poor Tom Walsh met with a sad end.' 'Wisha no, sir, he's not dead at all; and Jack Culnan, the sow-gelder, came after your honour left, and stitched him up,' was the reply. Immediately on hearing this, I trotted at once to where Walsh was lying, and, true enough, he was alive, and live-like. He at once greeted me with a cheerful countenance; pulse steady, at 100; complained only of soreness; had neither nausea nor vomitting; temperature all over the body natural. I proceeded at once

to examine the state of the wound, when you may judge my astonishment at seeing this extensive laceration rudely stitched throughout by uninterrupted suture, through means of a good-sized packing needle and twine. I made inquiry as to the operator's mode of proceeding in the case, as it struck me that there must have been considerable difficulty in removing the straw and soot which I saw adhering to, and covering the whole of, the protruded intestines, when I was informed that Culnan called for a large milk-pan, which he had filled with warm water, and into which he immersed the whole of the intestines, and, with a piece of soap, carefully washed off all extraneous matter. When he considered the whole sufficiently cleansed, he commenced by squeezing the bowels from above downwards, and inserting his packing needle through the integuments wherever he could approximate the edges. Between the portions where he introduced the suture, as he took tolerably wide stitches, the wound was gaping and the intestines appearing, but healthy-coloured. He had not even applied a bandage. Having some adhesive plaster with me, I tried to aid this piece of rude surgery, and got on a roller bandage. As you may suppose, I felt a deep interest in the result, and I regularly visited Walsh twice a day. No bad symptoms whatever accrued. There was slight suppuration at two or three points, but the wound healed kindly. On the third day after the accident, the patient having been well supported on arrow-root, sago, bread and milk, &c., a dose of castor-oil was administered, and acted copiously on the canal. The patient made a good recovery, but with an inconveniently large hernial tumour, which, for the remainder of his life, required his constantly wearing a pad and flannel roller to support it. He lived for three years after the accident, and was carried off by bronchitis.

"Case II.—Some few months subsequent to the accident to Walsh, I was sent for to visit a beggar-woman, who, when passing through a farm-yard, was gored by a cow. No surgeon, with scalpel in hand, could have more neatly divided the abdominal integuments, exposing the peritoneum without wounding it. The poor woman was suffering from the fright and shock. I at once brought the edges of the wound, which extended from the right groin to the left hypochondrium, together by long adhesive strips, and got on a roller bandage. The farmer on whose premises the accident occurred gave the patient a comfortabe room and bed. Not a single untoward symptom occurred, and at the end of four days, on examination of the wound, I found the greater portion united by the first intention. At the end of three weeks she was perfectly well, and able to walk about without inconvenience; and I saw her very frequently afterwards in several parts of the country, pursuing her old occupation.

"Case III.—Within a year or so after the last case, I was called in consultation to a man who, in a public-house brawl, was stabbed with a knife in the abdomen, near the umbilicus; a knuckle of intestine protruded, but was not wounded. There was a difficulty in

reducing the gut, which I found to arise from the point of the knife with which the wound was inflicted being much narrower than the portion of the blade which formed the external opening. This led to the passing the little finger into the wound, and with a probe-pointed bistoury, enlarging the internal opening; immediately on accomplishing which, the intestine returned. Strange to say, that in this case, which was very closely watched, no urgent symptom whatever occurred; nor was there even a dose of medicine required. The man recovered rapidly, and is living at this day."

November 12, 1857.

The President, Dr. Corbett, in the Chair.

Case of Traumatic Tetanus. By W. C. Townsend, M.D., Physician to the Cork Workhouse.—"Maurice Ahern, aged about 29, was brought into the Workhouse Hospital at mid-day, on Thursday, Nov. 5, complaining of pain in the head and throat. On my visit I found that, eighteen days before, he had received a severe wound on the index-finger of the left hand, to which he paid no attention; that he had continued to labour daily, and at work which obliged him to be up to his waist in cold water, drinking all the time very freely of whiskey and water. He was quite well till the 3rd of November, when he complained of spasms abont the jaws and neck, for which Dr. Johnson, of Passage, had bled him freely; not having obtained relief, he applied for admission to the Workhouse Hospital. His symptoms at this period were—the jaws nearly closed, and he had lost all control over them, so much so that the tip of his tongue was nearly bitten off; the muscles of the neck very rigid; his chest almost immovably fixed; and he could not swallow or cough without intense suffering and foaming at the mouth, expectorating, or rather endeavouring to expectorate, a frothy mucus; any attempt at drinking was attended with considerable suffering; his body hot, and inclined to perspiration. On examining the finger it was found lacerated to about an inch in extent; the wound presented a very unhealthy appearance. His neck and body were carefully examined, but he appeared to have received no other injury. Having availed myself of the experience and assistance of my colleague, Dr. Popham, he was ordered a terebinthinate enema at once, and a bolus of calomel and jalap; the feet and legs to be constantly stuped with mustard stupes, and blood to be taken from the cervical region freely, by means of cupping. At the same time, the necessity of removing the injured finger, as affording him a better chance for his life, was strongly impressed on him, and the arm and hand of the lacerated finger were directed to be kept immersed in warm water until next visit. 4 o'clock P.M. Visited him again, and found him much worse. Jaws and thorax almost immovably fixed; pulse 120, full; skin hot, and sweating freely. The bowels had acted copiously, large quantities of feculent matter and scybala had passed,

but no relief from the tetanic symptoms. Again the advantage of removing the injured finger was pressed on him, without effect. Ordered croton oil, one minim, with one ounce of olive oil every four hours. 7½ o'clock P.M. He had now consented to the removal of the finger. Having obtained the advice and assistance of my friends, Drs. Hobart, Gregg, H. Hobart, and Day, all of whom concurred in its propriety, chloroform having been administered by Dr. Popham, while under its influence the finger was removed. The operation produced no excitement, nor did he appear to be at all sensible of it. From the moment the first incision was made, there appeared to be a relaxation of the spasms; and after the hand was bandaged he could open his mouth much more freely. Ordered one drachm of laudanum at once, and forty drops every third hour, if restless, with beef-tea occasionally. He slept quietly for two hours, then had some beef-tea, and continued sleeping at intervals, but quite free from spasms.

"November 6, 5 o'clock A.M. Appeared greatly relieved; no recurrence of the spasms. Could open his mouth much wider, and felt greatly better. Took half a pint of beef-tea at a draught, and felt inclined to sleep. 9 o'clock A.M. Was attacked with a sudden spasm, the countenance becoming livid. The spasms rapidly extended to the body and extremities, and death immediately followed."

Sectio Cadaveris, thirty hours after death, by Dr. S. Henry Hobart.—"The arms and legs are stiff, apparently from the rigor mortis; the mouth is also closed from the same cause; but the muscles of the neck, as also all those of the trunk, are completely relaxed. On laying open the skull, and the spinal canal as far as the commencement of the lumbar region, the posterior portion of the cerebrum and cerebellum, as also the medulla oblongata, and the upper portion of the medulla spinalis, appeared of a deep red colour, as if from congestion; but on removing these parts and immersing them in water, this condition entirely disappeared, and, with the exception of the veins on the posterior lobes of the brain being somewhat fuller than usual, nothing abnormal was observed in the nervous system.

"The lungs were quite healthy, nor did they appear to be at all congested, nor was there any effusion into the pleura. The larynx and trachea presented nothing worthy of notice, but that, at the bifurcation of the latter, as also in both bronchial tubes, the mucous membrane appeared dark-coloured, but this was more from being stained by a quantity of dark-coloured mucus (which was more abundant in the subdivisions of these tubes) than from any congestion of the membrane itself; but the quantity of this fluid was by no means sufficient to interfere with the functions of the lungs.

"The heart was rather over the average size, and felt a good deal firmer than natural, as if in a state of contraction (a condition which I observed, on a former occasion, in the heart of a man who died from a laceration of the pulmonary artery within the pericar-

dium, caused by the wound of a pin, and whose case is recorded in a previous part of the Transactions of this Society). This firmness appeared to be due entirely to the state of the left ventricle, as the right side was quite flaccid. On laying open the different chambers, the valves of all were found to be quite healthy; the right auricle and ventricle were completely empty, not being even stained with blood; the left ventricle, on the contrary, notwithstanding its contracted state, contained a small quantity of blood, which was dark-coloured and quite fluid. The diaphragm differed in no respect from the ordinary condition of that muscle. The intestines were all distended with flatus, but there was no rupture or disease of any of the abdominal viscera to account for the suddenness of the patient's death."

November 25, 1857.

The President, Dr. R. Corbett, in the Chair.

Case of Obstruction with peculiar Morbid Appearances. By Thomas Gregg, M.D., Surgeon to the South Infirmary, Cork.—"Mrs. ——, aged 69, was attacked on Friday, 14th November, with spasmodic pain in the stomach, not severe enough to prevent her from eating her dinner, immediately after which it increased in severity. Her bowels being confined, she took a table-spoonful of castor-oil with twenty drops of tincture of opium, and went to bed at 8 o'clock; the pain still increased in intensity, so much so as to produce sickness of stomach every half-hour during the night and morning. Her symptoms having been described to me, and as she resided some distance in the country, not to lose any time, I ordered the following pill: calomel, 3 grains; powdered opium, half a grain, immediately; and visited her at 11 o'clock A.M., when I found her still suffering great pain entirely confined to the epigastrium, and with constant vomiting. She had applied a blister to her stomach herself during the night, which, however, afforded her no relief; the matter ejected from the stomach was yellow bile, with some portions of undigested potatoes; there was no pain on pressure over any part of the abdomen. I carefully examined both inguinal regions, fearing there might be incarcerated hernia, the symptoms being so like that disease, but none existed; the tongue was moist and slightly furred; pulse 76, soft and firm; there was no action of the bowels since the previous Wednesday, and then only very slightly; this created no uneasiness, as she was usually subject to constipated bowels. She was ordered to take immediately the following pill, the former one having given no relief: calomel, 5 grains; powder of opium, 1 grain; a terebinthinate enema after an hour; and infusion of roses, with double the quantity of acid, 8 ounces; mucilage, 1 ounce; sulphate of magnesia, 1 ounce; white sugar, 1 ounce: mix; two large spoonfuls every second hour till the medicine takes effect. Fomentations to the abdomen.

"November 15th, 5 o'clock, A.M. The pain and sickness of

stomach were so urgent that I was sent for at this hour; she had retained the pill, and the enema not having acted, a similar one was administered two hours afterwards, which brought down some hardened fæces; she took nearly half of the mixture, but the stomach immediately rejected it after it was swallowed. I gave her (the pain was so severe) a draught with forty drops of tincture of opium, and left her at 8 o'clock, when she had considerable relief from pain and sickness, having ordered her the following: calomel, 10 grains; powdered opium, 2 grains: in two pills; one to be taken every third hour, and, seeing the nature of the case, I expressed my desire to have further advice. When Dr. Townsend saw her along with me at 10 o'clock, there was some sickness since morning; no action whatever from bowels; occasional spasmodic pain, now referred to the umbilicus and left hypochondrium; tongue loaded; pulse 80, and firm; had taken the two pills. The introduction of the long tube was then agreed upon, which I passed up about twelve inches, and injected fully two quarts of soap-suds. She was also ordered the following: powdered Barbadoes aloes, 8 grains; calomel, 4 grains; capsicum, 4 grains; to be made into four pills, one to be taken every hour; fomentations to the abdomen to be continued. 9 o'clock, P. M. Enema did not act until after the administration of another, when the two passed off together, without bringing down any feculent matter. She had taken all her pills; pain and sickness less. She was ordered immediately another anodyne, with forty drops tincture of opium; compound rhubarb pill, 12 grains; calomel, 4 grains; capsicum, 4 grains; croton oil, 4 drops: to be made into four pills, one to be taken every fourth hour, and a draught with half a drachm of tincture of opium at 2 o'clock, if pain and sickness remained, and continue stupes.

"16th, 9 o'clock, A.M. Slept a little in the early part of the night, but suffered intense pain and sickness towards morning; no action from bowels; pulse and tongue as yesterday. Ordered immediately the following: calomel, 10 grains; powdered opium, 1 grain, in a pill; also, assafœtida, half an ounce; oil of turpentine, half an ounce; yolk of two eggs; in a pint of tepid water: in an enema immediately. 9 o'clock P.M. Enema administered at 1 o'clock P.M., but did not pass off since; no pain; slight sickness of stomach; pulse 80, soft; tongue as yesterday; abdomen tympanitic and full, stuped constantly during the day; an enema, with two quarts of warm water and a tablespoonful of salt, was administered, which brought down the fetid enema, but no feculent matter. Compound colocynth pill, 12 grains; capsicum, 4 grains; croton oil, 4 drops: to be made into four pills, one to be taken every third hour. A draught containing forty drops of tincture of opium to be given if necessary.

"17th, 9 o'clock, A.M. Took three of the pills; no action from the bowels; took the draught; pain in the abdomen very considerably increased; the small intestines can be plainly traced with the hand under the abdominal parietes. The draught to be repeated immediately, and a fetid enema as yesterday. 9 o'clock P.M. Enema

administered; took all the pills; no action from the bowels since the enema, which passed off immediately after, with the same results as the former. She said she had spent a better day than any since her illness, as she was more free from pain, but was sick four times during the day with the same bilious matter; pulse and tongue as yesterday. The calomel pills, with ten grains of opium, as yesterday; and a draught if necessary.

"18th. 9 o'clock, A.M. Slept a good deal during the night, and required the draught, as there was some pain, and the stomach frequently sick; the ejected matter was of an olive colour, evidently the contents of the duodenum; pulse 96; tongue dry and brown; pain less since draught; small intestines much more full and prominent. Ordered, calomel, 12 grains; powdered opium, 4 grains: in four pills, one every fourth hour. 8 o'clock P.M. No action from bowels; stomach constantly sick during the day; matter ejected stercoraceous and fetid; pulse 100, more feeble; no pain; an enema with one ounce of castor-oil was administered, and passed off; some slight hemorrhoidal bleeding. Repeat the draught, with forty drops of tincture of opium, and a draught with thirty drops of tincture of opium after six hours, if necessary.

"19th, 9 o'clock, A.M. She discharged the first draught almost immediately after taking it, and the stomach remained constantly sick until 1 o'clock, when she took the second, which afforded much relief, having slept for some hours after; the stomach, however, again became sick towards morning, with the same fetid matter as last evening; pulse 120, feeble and intermittent; skin covered over with cold perspiration. Ordered, powdered opium, 6 grains, in six pills, one every fourth hour. A pint of strong chicken broth to be administered by enema for support.

"20th. 9 o'clock, A.M. Moribund, and died at half-past 3 o'clock P.M., without any pain.

"*Autopsy*, twenty-four hours after death.—The abdomen alone was examined, which presented no traces of any peritoneal inflammation; stomach healthy and nearly empty; colon very much contracted in size, and along with rectum completely empty; no calcareous matter in the vermiform appendix. The small intestines, very much distended with gas, contain also a considerable quantity of fluid, but otherwise healthy. Upon tracing these down to the ilium, it was found to have a pouch, formed from its under surface, about the size of a hen's egg, nearly twelve inches from its juncture with the cæcum, and filled with gas; larger towards its free margin than where it joined the intestines. Immediately behind this pouch there was a slight constriction, which would enable any matter to pass more easily into it than into the continuous portion of intestine, and which now fully explained the cause of obstruction, for as this pouch became distended with air it was pushed upwards and forwards against the ileum, the sides of which were brought into close contact, and thus formed so complete a valve that it allowed free entrance into the cul de sac, beyond which nothing could go, and

regurgitation was the result. This in all probability was some congenital malformation, and increased in size as years advanced.

"This case is most interesting and remarkable. When I first saw it, I looked upon it as obstruction produced by spasm, acting under which, I first gave the opiate as the best means of preparation for an aperient; the constant sickness of stomach prevented the administration of fluid aperients. I did not at any time attribute the obstruction either to ileus or peritonitis, for although there was pain, and that occasionally very severe, the pulse did not in the slightest degree indicate either of these. After the free use of opium the idea of spasm ceased. The question next arose, what could cause it; there was no doubt the obstruction existed in some portion of the small intestines, as the constant administration of enemata, some remaining for hours, and afterwards coming away without bringing down any feculent matter, fully proved, but what part of the alimentary canal was not easy to determine, and certainly the position of the pain was no criterion, as the sequel showed; that there was mechanical obstruction to be relieved, there was no question, for which purpose the usual aperients in pills, as being most likely to remain down, were given; as also the enemata, the object of which was, if possible, by stimulating the large intestines, to produce the peristaltic motions of the intestines through the entire canal. The antiperistaltic motions, however, became so violent, that aperients had to be entirely discontinued, and we were obliged to rely entirely on the opium, which was in this case of the utmost value; it not only almost immediately relieved pain, but it kept in some degree under control the distressing vomiting, not only relief to the patient, but to the patient's friends; and it certainly in this prolonged life for some time longer. Amussat's operation was spoken of and discussed, but as no indication existed of the obstruction being produced by stricture of any part of the colon or rectum, it was at once set aside. He mentions as a diagnostic, as to whether the obstruction is situated above or below the cæcum, the secretion of urine—that where the secretion is abundant and natural, the situation was below the cæcum, and *vice versâ*. Now certainly this case was a distinct proof of the erroneousness of this doctrine, as the urinary secretion all through was both abundant and healthy, and yet the obstruction was situated above the large intestine."

Case of Injury of the Abdomen during Pregnancy. By William Cummins, M. D.—"Mrs. Murphy, aged 35, six months pregnant, was tossed by a cow on the morning of the 21st of September, 1856. The horn struck her with much violence midway between the umbilicus and pubis, without, however, causing any wound of the integuments. When I saw her, about five or six hours after the accident, she had recovered from the collapse which had followed the injury, and the pulse was pretty firm at 80. The fœtal movements had ceased, nor could I hear the fœtal heart; but the uterine souffle was pretty distinct in the immediate neighbourhood of the injury. There also an

enormous circumscribed tumour was discovered, tender to the touch; the entire abdomen, too, was remarkably tender and somewhat tympanitic, but there had been no vomiting. Fearing that peritoneal inflammation might supervene, I prescribed a grain of calomel, with the same quantity of opium, in pill, to be repeated every second hour, and omitted if it caused drowsiness or sleep: six of these were taken in twelve hours, when they were omitted, sleep having come on.

"Next morning I found her with a full, firm pulse at 88; considerable tenderness over the entire abdomen, but no other bad symptoms, I applied twelve leeches to the tumour, and directed that the pills should be repeated three or four times during the day.

"23rd. Tenderness less; tumour, which is rather smaller, has turned quite black, proving that its contents are effused blood. To take pills as before, an hour before bed-time.

"24th. Has had two severe rigors; abdominal tenderness less; continue pills as before.

"25th. No return of rigors; tumour is soft, and is decreasing in size, one point of its surface is red, and appears as if matter was about to point there.

"26th. Slight ptyalism; there is now no tenderness except over the tumour; omit pill.

"October 9th. The tumour has since been stationary as regards size, but most decided fluctuation is felt over the greater part of its surface. I made an incision with a bistoury, fully expecting to evacuate matter, but none escaped. There have been no fœtal movements since the morning of the accident, and the usual signs of the death of the child are present.

"12th. Exactly four weeks after the accident, I was summoned suddenly, and informed that the child had been born about an hour, and that the mother was dying of flooding. I found, on my arrival, the fœtus lying in the bed, unseparated from the mother, the placenta retained, and the bed full of blood and clots. The woman was faint, and in consequence of the painful parietal tumour of the abdomen I was unable to ascertain the condition of the uterus externally. I administered brandy and ergot, used cold, &c., while waiting for the patient to rally somewhat before proceeding to remove the placenta. After a few minutes pains occurred which caused the expulsion of some more clots, but had no effect upon the placenta, so, after giving some more brandy, I introduced my hand into the uterus, and found the placenta adherent firmly to the anterior part of the body of the organ, just in the situation of the external tumour; with great difficulty I pulled it off (not, however, without leaving some portions of it behind), and waited until it and my hand were extruded by uterine contraction. The hemorrhage ceased, but I had again to administer brandy before the patient rallied completely. I visited her again in the afternoon, and found the pulse feeble, with some

tenderness of the hypogastrium. I ordered a grain of opium every three hours till sleep; I also prescribed wine.

" 13th. Slept well; pulse 100; skin hot; omit the wine; continue opium pill according to circumstances.

" 14th. She got only three pills yesterday through neglect of the nurse, and spent a restless night; pulse 120; skin hot; tongue slightly furred; stomach sick; bowels very open; complains greatly of pain and tenderness of the right lumbar region extending forwards; pain also in right shoulder, but no pain or tenderness of uterus or abdomen; discharge from uterus natural in quantity, and quite free from fetor; a few shreds of the placenta have been passed. I ordered half a grain of calomel and a grain of opium every third hour, and six leeches to the right side; fomentations, &c.; and a large enema.

" 15th. Diarrhœa has ceased; pain of lumbar region much less; abdominal tumour has decreased in size, but the lips of the wound are open, and discharge a sanious fluid of intolerable fetor; I introduced a probe which passed directly backwards fully three inches; I had a charcoal poultice applied, and continued the pills.

" 16th. Very much improved; omit pills.

" 17th. I enlarged the wound of the tumour, and extracted a large putrid fleshy mass, which my friend Dr. Fleming examined under the microscope without being able to detect any special peculiarity.

" 18th. I removed some smaller portions of the same substance; the discharge is still sanious, and has the same abominable fetor. I omitted to mention that there was never any secretion of milk. The patient is now taking no medicine, but is plentifully supplied with nourishment and wine. From this time forward she graduall improved, and the wound of the abdomen healed perfectly.

" Some time since she applied to me (being then six months pregnant), complaining of a tumour in the situation of the old injury, with, at times, colicky pain and constipation. On examination I discovered that these symptoms were caused by a very large hernial tumour, which I easily reduced, and then ascertained that the abdominal wall was deficient for a space of at least three and a half inches by three, where the tumour had been. To remedy this I had a bandage made with a solid pad to fit exactly into this artificial abdominal ring: this completely prevented protrusion of the viscera, and she was lately confined at her full term, without a bad symptom.

" I was induced to bring this case before the Association as a sequel to the very interesting discussion which took place here a few meetings since on the subject of abdominal injuries. I think it more than probable that in this case the recti abdominis muscles were completely torn by the original injury, and that the corresponding part of the uterus, with the attachment of the placenta, were so much bruised as to cause immediate death of the fœtus, and a subsequent inflammation resulting in the adhesion which so

nearly caused the patient's death a month after the accident. The benefit of opium in large doses after severe injuries and hemorrhages, and especially those of the abdomen, was most marked in this case, and that the recovery of the patient is, in a great measure, attributable to it, is, I think, fairly deducible from the bad symptoms which occurred when, by neglect of the nurse, the proper quantity was not given."

December 9, 1857.

The President, Dr. R. Corbett, in the Chair.

Dr. Williams exhibited a boy who had recovered from caries of the cervical vertebræ with very little deformity, and promised to read the particulars of the case at the next meeting.

Watery Discharge from the Uterus during Pregnancy.—Dr. Harvey made the following remarks on this affection:—"In some books on Midwifery, watery discharge from the uterus is noticed as amongst the diseases to which pregnant women are liable. A clear, limpid, colourless fluid, oozing in quantity from a few ounces to pints daily, flows away, sometimes stopping for a short time, and recommencing; and in the majority of cases it continues nearly, or fully to the time of delivery. The abdomen does not appear palpably reduced by these discharges, and a living child is commonly born at or near the full time. In the greater number of instances, also, there is evidence of the usual quantity of liquor amnii being present on the supervention of labour. Dr. Alexander's case, given in the third volume of the Medical Commentaries, shows this very prominently. In a case by Dr. Petel, also, in the Gazette des Hopitaux of July, 1838, the liquor amnii is specially mentioned as normal in quantity.

"What is the source of this fluid, discharged, as it is, to the amount of hundreds of pints in the course of a few months? The supposition of its coming from the cervical glands of the uterus, or from the vagina, both of which have been assumed as sources of it by different authorities, appears altogether unlikely from the nature of the fluid, its quantity, and its mode of coming away in gushes of considerable quantity at a time. That it could come from the space between the decidua and chorion, or between the chorion and amnion, we have no pathological facts, so far as I am aware, to warrant our supposing such a source for the flow; whilst in the natural condition of parts such spaces do not exist; as, at a period of pregnancy before these discharges commonly show themselves (say the sixth month, or thereabouts), the cavity between the chorion and amnion has disappeared; and we know that the chorion and decidua are in contact throughout.

"Under these circumstances we seem driven to the conclusion that the amnion must be the source of this flow; that there may be occasional solutions of continuity in this membrane, admitting of discharges from time to time, which either close again, or admit by

the mechanical relations of the bag to the neighbouring parts of the amnion, refilling to a certain extent by a fresh secretion of its peculiar fluid. In confirmation of this view may be mentioned cases recorded by Dr. Denman, Professor Burns of Glasgow, and Dr. Pentland of Dublin, in which the amnion is said to have given way from fright, or other sudden shock, the waters being discharged without labour coming on. All these considerations tend rather to the view that the escaping fluid may be liquor amnii than to any other which has been propounded. In the case which I am going to relate the symptoms were similar to those which were present in the cases of watery discharge which I have been noticing, and in this instance, as will be seen, the flow was undoubtedly amniotic.

"Mrs. ——, mother of several children, was, for more than a year, the subject of heavy sanguineous discharges, which were so little influenced by the treatment adopted that the existence of polypus was thought possible. An examination revealed considerable congestion of the os and cervix uteri, with superficial ulceration, which gave way to treatment generally and locally applied. During last summer her health was considerably improved, but occasionally menorrhagic attacks, which latterly observed more or less closely the monthly periods, showed themselves. Matters were going on thus when she suffered a considerable shock by her eldest boy meeting with a severe accident, in which his arm was fractured. On that day, for the first time (six weeks before delivery), she had a sudden gush of clear watery fluid from the vagina, and since that time to the date of these notes (5th November), she was scarcely free from it; it would diminish or nearly stop for a few days at a time, to come on again in gushes, and in considerable quantity. The quantity escaping in one of these was seldom less, and generally more, than half a pint; and on the late occasion, when the flow was accompanied by a heavy sanguineous discharge also, she thinks the combined amount was fully a quart. It came on in the horizontal position as well as in the erect, and apparently without any cause. The size of the abdomen did not appear much affected by these at any time.

"The occurrence of the watery discharge suggesting the probability of pregnancy, notwithstanding the menstrual changes which had been going on with some regularity, and that, if pregnancy did exist, the ovum might have suffered hydatid degeneration, I proposed an examination for the purpose of ascertaining the point. I found an abdominal tumour occupying the hypogastrium to above the umbilicus, and on laying my hands over its surface, it gave a good example of the value of a diagnostic indication lately suggested by Dr. Oldham; it afforded distinct evidence of its being uterine by gradually and regularly hardening under my hand. The movements of the child were also felt, and fœtal pulsation, distinctly heard by the stethoscope, put an end to all doubts.

"I told the lady that she had passed some six or near seven months of her pregnancy without being aware of it, and that her labour would probably come on prematurely, all of which she en-

tirely disbelieved, and I could not induce her to make the necessary preparations. Two days after, I was called to her—the first stage of labour having set in with unusual distress and irritation; the pains peculiarly sharp and unbearable; the os uteri was hard and unyielding, and the breech, presenting in the second position, was felt in close contact. I immediately put her on antimonial solution, notwithstanding which the os uteri took over three hours to relax. After a first stage of about four and a half hours, and a second of less than half an hour, a male child, of scarcely seven months' growth, was born. The presenting hip and buttock were perfectly black, evidently from the direct pressure to which they had been subjected, in consequence of the loss of the liquor amnii. None whatever escaped with the child, and the sanguineous discharge was also unusually scanty. I do not think I ever witnessed so dry a labour."

Dr. S. Henry Hobart then brought forward a remarkable case of *Carotid Aneurism*, the report of which appears in another portion of this Journal (see p. 20).

December 23, 1857.

Dr. R. Corbett, President, in the Chair.

Case of Injury of the Spine in the Cervical Region, followed by Caries, Anchylosis, and Shortening, in its Longitudinal Axis, without Angular Deformity. By John Williams, A. B., M. D.—"On the present occasion I purpose to enter more particularly into the details of this interesting case. At our last meeting I was enabled, with some little difficulty, to afford you an opportunity of examining the boy, who resides in a distant part of this county, for yourselves, and the impress of what has been 'oculis subjecta fidelibus,' is, I am sure, from its very rare occurrence, deeply infixed on your mind.

"Timothy Vaughan, aged 10, a strong and healthy boy, in the month of March, 1852, received, when at school, a severe concussion of the spine in the cervical region. When sitting on a 'form,' a schoolfellow came behind him, and, laying his hand on the head of the former as a fulcrum, leaped over the seat; a considerable weight thus coming suddenly and unexpectedly on his head, it was forcibly bent to the right side, causing at the time severe pain. On coming from school he told his mother of the accident, as the pain continued unabated; he had troubled rest that night, but next day found himself well enough to go to school. A dull pain, referred to the back of the neck, was persistent; it was always worse at night; and at the expiration of two months after the injury had been received, during which period he continued at school, his mother first noticed his awkward manner in stooping to the ground to pick anything up; soon after, he lost flesh; his spirits became dull; he was listless, inactive, and exhibited neither desire nor ability to engage in his usual amusements,—in a word, he drooped. He was now confined to the house. At the end of the third month from the date of the injury,

an aggravation of all the symptoms took place; his gait became tottering; he was much emaciated, and he constantly supported his head with his hands, as if its weight were too great for the neck; when asked to turn round his head to look at an object held behind him, he invariably did so, first, by supporting it with his hands, and then turning the trunk round with it. A new train of symptoms now supervened:—he could no longer walk by himself without falling; the head became inclined forwards, till at length the chin rested on the sternum; and ultimately paralysis, first of the right side, and quickly after of the left, ensued. He was now entirely confined to bed, and was incapable of the least voluntary motion; in what position soever he was placed in, there he would remain until he was changed by his mother, who was also obliged for several months to spoon-feed him. About this period I, for the first time, saw him; he lay, or rather rested in bed, with his legs flexed, his heels touching the nates, but he himself was not conscious as to what position they were in, for often, when they were extended, he asked to have them stretched. The temperature of his body was very low. His mother stated, that since he was put into bed he was always 'as cold as ice;' from the clavicles down there was no sensibility. His chin rested on the sternum, and the spinous processes of the fourth and fifth cervical vertebræ were more prominent than the others. His skin was dry and chippy, but he sweated much in the head; he also exhibited the flush of hectic; his pulse weak and thready; he unconsciously passed his evacuations; the urine was cloudy; and his bowels were rather inclined to be constipated. His mother stated to me that he slept very little. I put an issue in the back of his neck, and ordered him to be supported with light nourishment. He continued much in the same state, his mother daily expecting his death, till March, 1853, that is, twelve months after the receipt of the injury; he now began to experience a difficulty in deglutition; solid food he was unable to swallow, and was, therefore, chiefly confined to liquids. His respiration, too, became impeded from imperfect action of the intercostal muscles, and this in a short time was followed by stridulous breathing, accompanied by spasmodic action of the muscles of the larynx. This impeded respiratory action soon assumed a paroxysmal character, attended with a general convulsive fit, which usually lasted nearly an hour. During those fits the difficulty of breathing was so great that his mother, fearing he might be suffocated, was in the habit of taking him in her arms into the open air. These convulsive fits, with the spasmodic and stridulous respiration, continued with more or less intensity for two months; a deeply seated tumour formed in the supra-clavicular region of the right side, evidently the nidus of a symptomatic abscess, but suppuration never took place. Towards the middle of the year 1853 his mother noticed that his sleep, both in tranquillity and duration, was improved, and from this dated the subsequent improvement which took place in all the symptoms. The muscles of the lower extremities first became obedient to the will; soon after, those of the upper,

and he soon advanced in strength to such a degree that he was enabled to be placed sitting on a chair, his head, of course, being supported. In a short time after he was placed in the sitting posture a new set of symptoms manifested themselves,—violent and sudden contractions of the anterior muscles of the trunk took place, causing emprosthotonos, during which he was often jerked forwards with violence to the ground; notwithstanding the frequent falls he got in this manner, he was never seriously injured by them. These attacks also soon remitted in intensity, and after a while ceased altogether; his strength now quickly advanced; he put up flesh, and felt confidence in placing his feet on the ground; but he experienced nearly as much difficulty in *learning* to walk as he did when an infant, and the same processes were now had recourse to as then in teaching him. Ultimately, however, he walked about and joined his companions in play; *but when running down an incline, however gentle, he lost the control of his muscles, and ran much farther than he intended before he could stop.* Until very lately this state of things continued. Since the beginning of 1856 he has been at school, and complains of nothing more than an occasional tenderness in the seat of the injury, and slight weakness in the lower extremities. As you have lately had an opportunity of witnessing, a considerable shortening of the vertebral column in its longitudinal axis has taken place, without the least appreciable incurvation. His head appears as if sunk between the shoulders, but the decrease in its relative bearings, with respect to the trunk, is strictly proportional. The nodding movements of the occipital condyles on the atlas, and the rotation of the head upon the axis, are perfectly intact. A bony tumour can be felt at the right side of the spinal column, and corresponds with the bodies of the third, fourth, and fifth cervical vertebræ.

"*Remarks.*—In this remarkable case—I say remarkable, from its very unusual termination—we can trace from the concussion, which must be regarded as the 'fons et origo mali,' the several stages of irritation; low inflammatory action of the cord and its membranes; caries of the bodies of three or more of the cervical vertebræ, followed by a considerable loss of substance; and finally, restoration of healthy action, terminating in anchylosis without incurvation, and, necessarily, shortening of the spinal column. In my remarks on this case, I do not intend to enter into any speculative disquisition as regards the amount of injury caused in the first instance by the concussion. I shall merely venture the opinion that I think it probable fracture did occur. Certain it is, however, that some serious lesion did take place, as proved by the *persistence* of the pain from the moment of the occurrence of the injury, which quickly roused the dormant strumous diathesis. And I may here state that I fully accord with the opinion of my friend, Mr. Adams, of Dublin, 'that the disease known as Pott's disease of the spine is more frequently the result of local injuries than we are aware of;' and I think I may correctly generalize, and say that the strumous diathesis is more frequently waked into action by some exciting

cause—whether injury, exanthematous diseases, &c., &c., when it must be regarded rather as a consequence than a cause—than is generally allowed. Sir A. Cooper, in his remarks on caries of the vertebræ, says, 'that when the disease is in the neck, the head is the only part of the body, except the vital organs, which retains its power; volition is lost in all the parts of the body below the seat of the disease, and the patient is reduced to the most abject state of helplessness;' the truth of which is fully attested by the symptoms in the present case. The same distinguished writer joins with those who, in the present day, decry counter-irritation in spinal affections. 'Blisters, issues, and setons, are commonly employed,' he remarks, 'but they frequently do more harm than good by the irritation which they excite in the constitution.' I must, with humility, express my entire dissent from this opinion, as I feel satisfied that a well-established issue is one of our best means in obviating the ill effects of that inflammatory action which is the chief source of the distressing symptoms that ensue. In this Mr. Adams fully concurs with me; for, when lately making allusion to the 'unusual termination' of the present case, he says:—'The case is also good as tending to show (though not absolutely to prove) the good effects of issues in spinal cases, as these counter-irritants are rather declining in fashion, and in my opinion erroneously declining.' In this case it was of material advantage that there was no symptomatic abscess: the vital powers were almost at the lowest ebb, and could not, therefore, bear any additional drain on the constitution. The occurrence of the spasmodic action of the laryngeal muscles, accompanied by the stridulous breathing, is a point of extreme interest, as it tends to elucidate the cause of that remarkable affection termed 'laryngismus stridulus,' or 'spasmodic croup,' and which is stated by Ley to depend upon pressure on the inferior laryngeal nerve, or on those fibrils which communicate with it—made by enlarged cervical glands, but which Sir Henry Marsh considers to be essentially a spasmodic affection of the muscles of the glottis, and suggests the *possibility* of the existence of the primary lesion at the root of the pneumogastric nerve. I was always inclined to dissent from this view, and I consider Ley's opinion fully borne out by the present case. In the first place, there was present an extreme excitability of the entire spinal system, as evinced by the symptoms before detailed, but particularly by the constant convulsive fits, and the complete emprosthotonos which occurred. Secondly, by the perfect occlusion—temporarily—of the aperture of the glottis; on which occasions the little patient made such forcible efforts to breathe that, as I before stated, his mother was in the habit of taking him in her arms in to the open air lest he might be suffocated. Now, at what period of the disease did this *extreme amount* of excitability of the spinal system of nerves manifest itself?—or when did this spasmodic and stridulous respiration take place? Not in the early stages, although a low inflammatory action in the cord and its membranes was persistent, but exactly at that period in the

progress of the disease when the morbid action in the vertebral column was arrested, when a healthy action supervened, and when new matter was deposited for the restoration of the breach—and which new matter, by its *pressure* on the pneumogastric nerve, occasioned the perfect occlusion of the laryngeal passage, with the stridulous respiration. The difficulty of deglutition—for it must be remembered that at the period of the occurrence of the spasmodic and stridulous respiration, the patient could not swallow solids—establishes another link in this chain: for the pharyngeal branches of the pneumogastric nerve are the chief motor nerves of the muscles of deglutition; and, therefore, the same pressure satisfactorily, in my mind, accounts for the difficulty in swallowing solids. In this case, where so much shortening of the spinal column took place, surely nature disposed of the superfluous portion of the cord itself. Whether was it by compression of its structure, or by absorption? I should rather think by the latter process. There are many cases recorded in which extensive caries of the spinal column was found after death, but of which no notice was taken during the lifetime of the patient; also, with a very great amount of incurvation, no paralysis was present. These, and many other circumstances, tend to show that it is to the inflammatory action of the cord and its membranes most of all the symptoms are referrible; therefore we should endeavour, by counter-irritation and careful attention to the digestive organs, to meet it. The position of the patient is also a matter of primary importance where there is a prospect of anchylosis. It is very rarely that this occurs without deformity. In the lumbar region, shortening of the spine, in its longitudinal axis, is not so uncommon; but in the cervical region there are indeed few well-authenticated cases recorded of so favourable a termination. When anchylosis does occur in this region, the face is almost invariably directed downwards, and the motions of the head upon the atlas and axis are seriously impeded. Concussion of the spine, particularly in children, should be always watched with suspicion, as morbid action may ensue from a very trivial cause; and this morbid action may not be observed until a considerable time had elapsed after the injury was received, when the exciting cause may be overlooked. On the other hand, urgent symptoms may immediately follow the injury, which, under judicious management, can be removed. Dr. Copland gives a case in which three ofthe dorsal vertebræ were anchylosed without distortion ; and Cruveilhier gives plates in which anchylosis had resulted from injury. Where the spinal column appears as if bent, more or less incurvation is generally the result. I may here allude to the various contrivances that have been devised in order to afford an easy position for the patient; but it is important to remark that in this case the patient was confined to the recumbent posture alone."

Dr. S. Henry Hobart then exhibited a pathological specimen, and made the following remarks:—

Mary Bride, aged 58, married, and mother of one child, of nervous temperament, first came under the care of Dr. O'Flynn, May 26, 1857, complaining of acute pain in the left iliac region, which pain, she then stated, was an "ould comrade;" stomach rather irritable, and bowels confined.

She was much relieved at this time by a sinapism to the side, and a dose of calomel and opium, followed by castor-oil. The symptoms, however, soon returned, but were so varied in their character that they were for some time attributed to hysteria, the only one at all persistent being the pain in the left side. The irritability of the stomach was not more severe than what would be commonly attributed to biliousness, though occasionally very distressing. The confined state of the bowels often required severe cathartics of gamboge, castor-oil, &c., but purgative enemata generally answered the purpose. Up to August 28 she was able to attend occasionally at the dispensary; about this period, however, the pain became aggravated, so that she required large doses of morphia. The irritability of the stomach also increased, but was a good deal relieved by the use of lime-water with milk. About two months later the pain, which had heretofore been almost entirely confined to the left iliac region, extended across to the right hypochondrium, and soon became very acute immediately under the liver. Nothing could, however, be felt in any part of the abdomen to account for her suffering. But towards the close of October a tumour, apparently about the size of the fist, was observed at the upper part of the abdomen and to the right of the mesial line; its not being felt sooner being probably owing to the habitually constipated and tympanitic state of the bowels, and the pain on pressure causing contraction of the abdominal muscles. The tumour now rapidly increased in size, and, by the 15th December, had extended downwards as low as the right iliac region, terminating inferiorly and internally by a well-defined rounded border, but externally, or to the right side, it could not be so distinctly felt. Until lately she has been able to digest what little food she takes pretty well, but the stomach has now become so irritable that she can retain nothing on it, while the smell of the ejected matter is most offensive.

December 18th. Has been, for the last day or two, vomiting a quantity of dark, grumous, bloody stuff, of extremely offensive odour; she can take nothing but an occasional sip of wine; pulse scarcely felt. She died this day shortly after the above report.

Dr. O'Flynn, owing, no doubt, to his unremitting attention to the poor woman during life, was permitted to make a post-mortem examination, when, on laying open the abdomen, the enormous tumour I now lay before you was brought into view. On raising it from among the intestines in which it was embedded, it proved to be a cancerous mass connected with the stomach, appearing, in fact, to be contained within, and almost completely to fill, that organ. At its upper and outer angle it was slightly adherent to the liver, but did not appear to involve the tissue of that organ; immediately be-

low this, or at a point corresponding to the lesser omentum, there was seen a fungous growth closely resembling what is often seen in open cancer of the breast, but quite unstained by blood. There was not, however, the slightest adhesion to the parietes of the abdomen, or to the other viscera, bearing out, in a remarkable degree, the fact that the peritoneum is peculiarly exempt from adhesive inflammation. The walls of the stomach and colon were, no doubt, in such close contact that, on laying open the latter, the tumour appeared to protrude into it; but this seems to have been due to their lying in close contact, and not from any actual adhesion. On removing the entire mass, it is found to be almost completely modelled to the shape of the stomach, and on laying open that organ it is seen to be almost filled with a granular and somewhat irregular body, stained on its surface with black blood, mixed with a highly offensive secretion, precisely similar to that which she had been vomiting for some time past. The diseased mass sprung from the lesser cavature, and does not even now involve either orifice, the stomach being still quite pervious; indeed, the pylorus appears to be even more freely open than natural. Thus the stomach was enabled to carry on its functions to the last, although, of course, a good deal disturbed, and the food, being enabled to pass on into the duodenum, prevented what is so generally a most distressing and very characteristic symptom of cancer of the pyloric orifice—the habitual rejection of the food after it has been retained for a certain time.

The mass measured about six inches by five, extending from the liver to the right iliac region, and weighed probably about four or five pounds.

TRANSACTIONS OF THE BELFAST MEDICAL SOCIETY.

SESSION 1857–58.

(*Continued from* vol. xxiv. p. 468.)

November 2, 1857.

The President in the Chair.

The President brought forward the following case of *Subconjunctival Tumours:*—

"Although in several systematic works on ophthalmic medicine and surgery in our language the subject of subconjunctival tumours is referred to, I cannot find mention of any like the one I am about to bring under the consideration of this Society,

[a] These Transactions are furnished to us by Mr. Browne, President of the Society.—Ed.

and which, from its peculiarity, I wish to put upon record in our Transactions.

"On the 21st of September last, a young man, aged twenty-one years, and from the neighbourhood of Ballynahinch, applied to me at the Ophthalmic Institution. On examining the case I found the lower lid of the left eye considerably everted, and pushed forward by a tumour which showed itself beneath the conjunctiva, where it is reflected from the lid unto the sclerotic. On further examination I found that more than one tumour existed, the largest being about the size of a small kidney-bean, while on the margin of the cornea and sclerotic a small hard growth existed on either side. All of these growths, with the exception of those on the margin of the cornea, were quite movable. The patient complained of the uneasiness which he lately felt from any movement of his eye, and of the constant flow of the tears at that side over his cheek. This state of the parts had only existed for some eighteen months, as, previous to that time, the tumour or tumours, though present as long as the patient could remember, had not enlarged so much as to cause any uneasiness, or the constant epiphora then present. Having come to the resolution to remove the growths, I proceeded, with the assistance of Dr. William M'Cormac, to do so in the following manner:—I pinched up the conjunctival covering of the first tumour, and with a blunt-pointed scissors cleared it fully away; I then seized the tumour with a hook-forceps and carefully dissected it out, and thus removed the other growths, one of which I found was adherent to the rectus muscle. On introducing the point of my finger into the cavity I had made, I found a small exostosis, or rather bony tumour, attached by a narrow neck or pedicle to the margin of the orbit, immediately behind the lachrymal sac. Having cleared away the soft parts, carefully guarding the lachrymal apparatus from any injury, I introduced a very fine-pointed bone forceps on the end of my finger, and then succeeded in dividing the bony neck or attachment. In the removal of the deepest tumour,—the one attached to the internal rectus,—an artery of considerable size was cut, the hemorrhage from which at first was quite furious, as the blood sprang to the distance of several feet; the free application of cold water, however, soon caused the vessel to contract and cease bleeding. Upon examining the several tumours removed, I found them all of analogous structure: one was semi-cartilaginous, one quite cartilaginous, one having bony deposits in it; while the seeming exostosis proved to be one of those tumours which had become attached to the margin of the orbit, and then became ossified, a condition to which all of these growths would likely have come in time.

"It is very probable that these tumours were congenital, as the young man stated that they were discovered when he was an infant of less than one year old. For several years they had not increased in size, but some time back, about the period of puberty, they began to enlarge very much; so much had they increased lat-

terly, that for about a year they had greatly impeded the free movements of the eye, and, as I have already stated, had produced a very disagreeable stillicidium, caused by the pressure upon the derivative part of the lachrymal apparatus. On the whole, the case is interesting, but principally from its rarity: I am not aware of a similar one having been placed upon record, and I have not seen anything of a like character, out of some twenty thousand cases of eye disease. About a year and a half since I saw in a young gentleman a cartilaginous growth (congenital) upon the sclerotic, at the margin of the cornea; this was as large as a split marrowfat pea, and had the conjunctiva freely moving over its polished surface. As it had latterly increased in size, and was causing the patient some uneasiness, I removed it by slicing it away with a very sharp knife.

"These hard deposits, I may remark, are not unfrequently seen upon the margin of the cornea, and many cases of these and of subconjunctival growths are mentioned by the various authors who have written upon ophthalmic subjects."

The PRESIDENT also read a case of *Cancer Scroti*. "The patient is a sweep, aged twenty-six years, who has been employed at his trade for about eighteen years. Two years ago he first observed a small warty-like growth upon the lower and front part of the scrotum, which latterly had increased very considerably in size, and had been painful, having a stinging sensation, very frequently when not even touched. At the time he entered the hospital, under my care, a fortnight since, the growth had attained the bulk of a horse-chesnut, was scabrous, hard, and had several points of ulceration upon its surface, from which a foul discharge was poured out. Besides the cancerous structure referred to, several hard points presented upon the scrotum and body of the penis also; these were very hard, and about the size of a large pea. The inguinal glands being free, and no doubt existing as to the propriety of removal, I extirpated the large tumour: by raising it up and cutting behind it with one sweep of the knife down to the tunica vaginalis, I at once disposed of it. The several hard points on the scrotum and penis to which I have referred were, upon slitting them across, found to be enlarged sebaceous follicles, containing the usual cheesy-like matter, and having in the centre of each a very hard nucleus of carbonaceous matter; these latter were larger than a No. 4 pickle of steel, and were round and polished. The soot had evidently been admitted into the follicles, had there received frequent additions, and, finally, by causing considerable irritation, had caused the sebaceous matter with which the nucleus was surrounded to be poured out. Each of these little tumours was very easily turned out of the pseudo-capsule by which it was limited, and without causing the patient any pain. The principal wound in the scrotum was brought together by a few points of suture, and healed up kindly."

The PRESIDENT then exhibited the *Ophthalmoscope* to the Society, and explained its use. He especially referred to its value as a

means of diagnosing those lesions of the retina, vitreous body, and choroid, which are fatal to vision; and thus in preventing the conscientious practitioner from submitting the unfortunate patient to a course of treatment which must, of necessity, not only fail in conferring any benefit, but most likely would materially injure the sufferer's general health. He also explained that considerable experience in its use must be had, before the aid which it unquestionably affords in diagnosis could be fully realized.

December 7, 1857.

The President in the Chair.

Dr. Murney brought forward the following interesting case of *Injury of the Spine:—*

"At the September Meeting of this Society I reported a case of injury of the upper part of the spine terminating fatally. The particulars appear in the Transactions of our body, as furnished from the case-book by the house surgeon, Mr. A. H. Cooke, in consequence of my absence from town. Since then, with Mr. John Smyth, I attended another case of injury at the same part, caused in a similar manner, and, I regret to say, followed by a similar result.

"I bring this second instance forward, as I consider it is interesting to note that, although in many features the cases were alike, still there were some points of dissimilarity.

"On the 19th October, Mr. M. M., a master plumber, healthy and strong, but of spare habit, aged 34, while examining the progress of some work, fell from a height of fifty-five or sixty feet; in his progress downwards his body struck against projecting beams twice, which somewhat tended to diminish the violence with which he came to the ground. Parties ran to his assistance immediately. He was found perfectly sensible, even from the first, I am told, but totally unable to move his limbs. There was, of course, great prostration. Mr. Smyth saw him ten minutes after the accident, and ordered some stimulants to be administered, and as the sufferer's residence was some distance from town, he had him removed to his office. I saw him there at 3 P.M., about half-an-hour after the accident; he described his position prior to the fall, its occurrence, and the conduct of those around him afterwards; he appeared perfectly collected; he stated that the entire weight of the frame had been received on the spine between the shoulders, and that he suffered from pain in no other part; sensation over the surface of the body was perfect, and he was conscious of the application of a cold hand, of pinching the skin, &c., &c. None of the bones of the extremities were injured; several slight contusions and abrasions were observed on the trunk and limbs; there was marked deformity at the upper part of the back; a well-defined depression corresponding to about the last cervical and three upper dorsal vertebræ; examination of this produced intense pain, and he entreated us not to touch it. Complete loss of power of the lower limbs, also of the upper as far

as the elbow; but there was slight power of flexion of the forearms; this was performed most imperfectly; priapism. The respiration diaphragmatic; bowels acted on during the morning; he also passed urine during the day.

"The treatment pursued was, the administration of two grains of calomel, with one-eighth of a grain of opium, every three hours; the application of mercurial ointment to the groins and axillæ every four hours, and the introduction of the catheter every eight or ten hours. At half-past 10 P.M., the pulse had somewhat improved, and there was diminution of the effects of the shock.

"20th. Cutaneous sensibility completely lost below the clavicles; he still, however, possessed the same degree of motor power in the forearms. Pulse 96, soft; the secretion of urine scanty, in no instance, even to the termination, exceeding twelve ounces in the twenty-four hours.

"21st. No alteration in symptoms; no effect of the mercury; abdomen becoming tympanitic, in the afternoon it was extremely tense; an enema of tincture of assafœtida, castor-oil, &c., was administered, but immediately returned; after some hours O'Beirne's tube was introduced, and a second enema thrown up; a large quantity of gas and fetid stools were expelled.

"22nd. Less tympanitis; the bowels were acted on three or four times during the night; the pulse was weaker, about 84; if the terms could be applied under the circumstances, he was restless and dissatisfied. Not the least appearance of mercurialization; of course a larger quantity of opium was given with each dose of the calomel, in consequence of the condition of the bowels, which were acted on three or four times during the day.

"23rd. Slept none; was peevish, evidently sinking. At noon it was apparent the fatal termination was close at hand. He died at half-past 4 P.M.

"No post-mortem examination would be permitted.

"On contrasting the last case I brought before you with this I have just detailed, we observe the injury was received at nearly, but, I should say, at not precisely, the same part *In the first*, examination showed the fifth, sixth, and seventh cervical and first dorsal vertebræ to be fractured, although not compressing the medulla. *In the second*, although we could not verify our opinion by a post-mortem, we knew some of the divisions of the brachial plexus were uninjured, and inferred that the fifth at least, and possibly the sixth, cervical bones had escaped.

"Both were young and healthy men; and yet he who received fractures high up the column lived five days, while the sufferer of an injury somewhat lower lived only four days. Perchance, had we been permitted, we might have found more extensive lesions in the latter than existed in the former case.

"Again, in the first there was a gradual accession of the symptoms of paralysis, involving the parts most distant from the seat of injury,

and subsequently those nearer to that region, extravasated blood compressing the cord: reaction was not only completely established, but on the second day the pulse became full and bounding, the skin hot, &c., so that I believed there was inflammation of the cord (the effects of it were found at the post-mortem), and took some blood from him, with marked alleviation of the symptoms.

"In the second, paralysis of motion existed from the moment the injury was received. At no period did the pulse become hard; it never was even full.

"In both instances I was forcibly impressed with the clear and unclouded condition of the mind from the time of the accident until a few hours before death, when, from imperfect arterialization of the blood, stupor gradually supervened. Both were treated on the same plan, and in neither could the specific effects of mercury be produced, although the measures generally successful in bringing the system under that metal were adopted; and, in addition, in one the introduction of mercurial ointment into the rectum was tried without any satisfactory result. Similar torpidity of the absorbent system is often met in diseases of the nervous centres.

"The free purgations which followed the necessary administrations of enemata, and which are to be ascribed to the mercurial course, must have weakened the sufferer, and thereby hastened the fatal termination.

"Although I am not acquainted with any line of treatment which would hold out the least prospect of success, in cases of severe injury to the upper part of the spine, I certainly look with some doubt on the use of mercury when I balance the *probable* shortening of the patient's career with the *possibility* of producing the constitutional effects upon which only the last ray of hope must depend."

The PRESIDENT, having referred to Dr. Murney's clear account of the case just submitted, remarked that upon a review of similar injuries which had come under his notice, he could not see that any other treatment but that adopted could have afforded the slightest benefit. Unfortunately, the surgeon met with cases of injury that must of necessity prove fatal, in which all treatment would be quite useless; but so long as the exact nature and extent of the lesions were doubtful—as in the instance before the Society—the practitioner was called on to do all that his knowledge of anatomy and physiology, combined with experience, could do, and which gave any rational hope of averting a fatal issue; therefore he considered that in those injuries of the spine—the exact lesion being unknown—local depletion and the exhibition of mercury were the only means likely to be of benefit; and he would not be deterred from using the mercury, though it might produce a depressing effect upon the patient; for if the symptoms depended upon inflammation of the cord or its membranes, mercury afforded the only probable means of

allaying it, and if the lesion proved to have been of a more serious nature, the practitioner would feel that no treatment could have prevented a fatal result.

Dr. Heeney remarked that where he found difficulty in producing mercurial action, as in cases similar to that under consideration, he was in the habit of introducing one or two drachms of the strong mercurial ointment into the rectum, and that he usually found the specific action very rapidly promoted.

From a question put by Dr. Halliday, a brief discussion incidentally arose relative to the propriety of any operative interference in these cases, with a view of raising the depressed portion of bone or bones; but the general feeling was that such a proceeding would not be justifiable in cases of such extensive injury as those lately brought under the notice of the Society.

Dr. Drennan remarked that counter-irritation might be found useful; but both Dr. Murney and the President considered that those cases usually gave no time for the action of such remedies.

January 4, 1858.

The President in the Chair.

Dr. Pirrie read the following paper:—

Puerperal Convulsions.—"I have long been dissatisfied with the *routine practice*, and its results, in cases of puerperal convulsions. By routine practice I need scarcely say that I refer to bleeding, which in its various forms has been recommended most urgently by almost all of even our modern authorities in obstetrics.

"Thus, we everywhere meet with expressions such as the following: 'Bleeding is our great reliance.' 'The lancet is our sheet anchor; and blood may be taken to a very large extent' (Ramsbotham). 'If there be a case in which the bold and daring use of the lancet is demanded, it is the case of puerperal convulsions' (Meigs). 'The first thing to be done is to take away blood from the arm or temporal artery largely and in a full stream' (Churchill). 'In the first rank both as prophylactic and curative are to be placed sanguine emissions' (Cazeaux). But that such was the universal practice, I need cite no authority, as I believe all of us have been in the habit of thus treating our cases of puerperal convulsions, as I was myself till some time ago, when I happened to have a case of convulsions occurring during the progress of Bright's disease of the kidney in a male, and a case of puerperal convulsions in a pregnant female before labour, under my care about the same time. I was then most forcibly struck with the similarity of the signs and symptoms in the two cases: in both there was œdema of the face and upper extremities, accompanied by albuminuria, and the paroxysms of convulsion in both were absolutely identical. I treated them both on the same principles, of which bleeding formed no part, as being virtually different stages of the same disease, and had the satisfaction of seeing the case of

puerperal convulsions recovering without a trace of remaining disease; and the case of Bright's disease, although looked upon at one time as actually moribund, so far recovered as to be able to leave hospital in decidedly an improved state.

"In the book just published by Herr Braun, Professor of the Imperial Midwifery Clinique at Vienna (the chapter of which on convulsions has been translated by Dr. Duncan of Edinburgh), he formally protests against the practice of bleeding in cases of puerperal convulsions, and says that 'general depletion of blood has very seldom any valuable effect on the symptoms, and generally produces irreparable injury.' The same author also affirms that *every* case of *true* puerperal convulsion, or eclampsia vera puerperarum, is dependent on *uremia*, that is, on the blood being contaminated by urea, and perhaps also by other excrementitious products which should have been excreted by the kidneys, had they been properly discharging their function.

"This important fact in pathology, like almost all other discoveries in medicine, appears to have been arrived at by degrees. Thus, as early as the time of Hamilton it was observed that women who during pregnancy had œdema of the face or upper extremities, were very liable to have convulsions at the time of labour. Following this up, Simpson of Edinburgh, in 1843, found that the secases were associated with the presence of albumen in the urine; and in 1848 he demonstrated the presence of disease of the kidney at the post-mortem of a case of puerperal convulsions; and he also observed the presence of albumen in the urine of a child affected with convulsions, born of a mother similarly affected. But I believe it has been reserved for Professor Braun first publicly to declare that every case of *true eclampsia* arises from uremia, and thereupon to modify the treatment of the disease.

"As the term eclampsia is generally applied to an acute affection of the motor function of the nervous system, characterized by tonic and clonic spasms, and insensibility, and as several different pathological states produce these phenomena, and yet have nothing further in common, and have not the same influence upon the life of the mother or offspring,—it becomes of the utmost importance to make a true and particular diagnosis of these different forms of convulsions.

"Agreeing with Professor Braun, I would restrict the term true puerperal convulsions (which may occur during pregnancy any time after five months, during parturition or childbed, or even later) to those cases dependent on *uremia*. The term uremia is still retained, although it is admitted that the convulsions do not originate, as was formerly supposed, from the blood being poisoned by urea, as filtered urine has been injected into the veins of animals without producing convulsions.

"After a series of carefully performed experiments, Frerichs was led to the conclusion that the phenomena of uremic intoxication are not produced by urea or any other ingredient of the urine, but that they commonly arise from this circumstance, that the urea,

accumulated in the blood, is transformed into carbonate of ammonia, under the influence of some peculiar ferment. For the production of uremic phenomena, it is therefore necessary to have in the blood urea in quantity, and also some ferment, by means of which the urea may be changed into carbonate of ammonia. If the ferment be wanting, then the blood may for a long time be impregnated with urea without any convulsions appearing; in this way is accounted for the fact that in the bodies of persons dead of Bright's disease, the blood may be found saturated with urea, without any uremic phenomena having been observed during life. Simpson has most ingeniously suggested that it may be to this principle of action that the beneficial effects of chloroform inhalations are due in uremic convulsions, as chloroform produces a temporary diabetes mellitus, and it has been demonstrated that sugar in minute quantities, added to the urine, prevents for a time the natural decomposition of urea into carbonate of ammonia.

"Among other convulsive affections which may occur during pregnancy or labour, I would include hysteric, epileptic, and apoplectic convulsions, and convulsions arising from other impurities (bile, carbonic acid) retained in the blood, or from poisons admitted into the circulation (as lead, mercury, arsenic), and anemia. The possibility of any of these forms of convulsions (differing essentially in their prognosis and treatment) occurring during labour, amply shows that too much importance cannot be attached to the *differential diagnosis* in all cases of puerperal convulsions.

"The true pathology of eclampsia (till 1848, when Simpson first showed the co-existence of granular degeneration of the kidneys) was unknown; the usual remark being, that post-mortem examination afforded but little information, there generally being no deviation whatever from the healthy state of the *brain*. But since attention has been directed to the renal origin of puerperal eclampsia, I believe that in almost every fatal case that has been minutely examined, one or other of the three stages of Bright's disease has been constantly found, corresponding to the description given by Dr. Bright, and recently and more minutely by Frerichs, and by Dr. Johnson in his valuable work on Diseases of the Kidney.

It is not necessary that I should take up time describing these pathological changes, which must be familiar to all, from the many specimens of diseased kidney exhibited in connexion with Bright's disease. I would rather direct attention to the signs of the existence of this disease during life: I mean those changes observed in the urine and the œdematous condition of the face and upper extremities, which, as I have already remarked, has long been observed as a precursor of convulsions; but dropsical swelling is not necessarily connected with albuminuria, just as, on the other hand, there occurs during pregnancy a dropsy in which the urine is found quite normal.

"Hyperemia of one or both kidneys, caused by congestion of venous blood, is the primary stage of acute Bright's disease. This

is soon followed by fibrinous exudation into the Malpighian corpuscles, the albumen only of this exudation at first passes off with the urine, while the fibrinous matter, coagulating in the tubuli of the cortical substance, and remaining in them for a longer or shorter period, is at length propelled from them, along with the exfoliated epithelium, in the form of cylindrical casts of the tubes. Hence we have, during life, first the urine charged with albumen, which may be discovered with the usual *tests*; and afterwards, the casts of the tubes, which can only be discovered by microscopic examination.

"In testing for albumen we should be careful to use moderately diluted nitric acid, and not the strong fuming acid, as the latter decomposes and redissolves the albumen. And we should also bear in mind that it is only in urine having an *acid* reaction that albumen is precipitated in quantity by boiling; for in alkaline urine the *ammonia*, which is always present, retains the albumen in solution. I have known the presence of albumen to have escaped observation from the neglect of these simple precautions.

"Different explanations have been given as to the cause of the renal hyperemia, the most plausible ascribing it to congestion produced by pressure of the gravid uterus on one or both renal veins. Of cases of eclampsia, above 80 per cent. (96 per cent. Collins) occurred in *primiparæ*, in whom, on account of the greater resistance of the abdominal walls, a more powerful counter-pressure is produced on the kidneys. Eclampsia, too, is frequently met with where there is increased pressure from plural pregnancy, dropsy of the amnion, deformed pelvis, or excessive obliquity of the uterus. Something also is, no doubt, due to the altered state of the blood during pregnancy.

"*Treatment.*—Should albuminuria be diagnosed during pregnancy, something may be done by way of *prophylaxis*, by the administration of such medicines as will prevent the decomposition of the urea, or rather will neutralize the carbonate of ammonia. According to Frerichs, benzoic acid is the most efficient remedy, and the free use of drinks acidulated with lemon-juice or tartaric acid. If the secretion of urine be very scanty, the occasional use of purgatives will be useful as preventing local congestion. But as long as pregnancy continues, we can only expect the mitigation of the albuminuria, not its cure, the cause still being present; and should symptoms arise indicating immediate danger to life, or producing serious functional derangement of the heart, brain, or lungs, the propriety of inducing artificial premature labour should then be seriously entertained.

"When convulsions have actually occurred, we have to consider the medical and obstetrical treatment.

"The medical treatment will be the same whether the convulsions occur during pregnancy, labour, or childbed,—the first object being to diminish as much as possible the reflex excitability of the nervous system, and to weaken the paroxysms so as to gain time. As the best means of obtaining these results, all who have used chloroform

inhalation speak of it in the highest terms, its success surpassing all expectations. It should be administered immediately upon indications of an impending paroxysm presenting themselves. The inhalation should be kept up till the premonitory symptoms of the paroxysm disappear—which is generally in the course of a minute or so—but, should it not be possible to cut short the paroxysm, the chloroform inhalations should be suspended during the paroxysm and supervening *coma*, for obvious reasons.

"The beneficial effects of chloroform may be ascribed to its sedative effect on the nervous system, or to its peculiar action on the blood, as suggested by Simpson, in arresting the further decomposition of the urea.

" In the interval of the paroxysms the direct medical treatment of the uremia should be proceeded with by administering five to ten-grain doses of benzoic acid, and cold acidulated drinks. If the bowels have been constipated, and the paroxysms severe, a bolus with five to ten grains of calomel, with a drop or two of croton oil, followed by turpentine injections, will generally be found useful. To moderate the secondary congestions of the head which come on after the paroxysms, the local application of ice or the cold douche will be found to have a more powerful and lasting influence than the use of leeches.

" Sponging the skin with tepid vinegar is stated to be very useful in producing diaphoresis. As a rule, general depletion should be avoided, as it very seldom produces any valuable effect on the symptoms, and generally produces irreparable injury. If, however, a cautious selection of single cases be made, one moderate bleeding in strong, full-blooded women may not only not be injurious, but may much facilitate the action of other remedies.

" Revulsive measures, as sinapisms to the calves of the legs and soles of the feet, and blisters to the nape of the neck, are generally recommended, but I do not think that any very marked benefit can be expected from them.

" But whatever benefit may be derived from any of these measures, we must still hold the *prompt* and *careful evacuation* of the uterus to be a most essential and important point in the treatment of puerperal convulsions. How this is to be accomplished will, of course, depend upon whether uterine action has commenced or not, or upon the stage which the labour has reached. Should the paroxysms continue after the evacuation of the uterus, and the administration of benzoic acid and cold acidulated drinks, opium given in doses of one to three grains, or one-eighth to one-half grain doses of morphia, with opiate injections, generally acts most beneficially."

Note on a New Preparation of Bark—QUINIUM—(the Alcoholic Extract with Lime, of M. A. LABARRAQUE, Manufacturer of Chemical Products at Havre).

THERE is no medication which has been more fully tried of late years than that by cinchona; and the complete study of large doses of the alkaloid of the valuable bark has much extended the circle of its therapeutic employment. Unfortunately, this progress of science has almost become a danger to the art. Contrary to what commercial statistics have long since demonstrated, namely, that an increased consumption always produces a proportional depression in the price of commodities, according as the therapeutic use of cinchona has become more extensive, the price of the remedy has progressively risen, and this has taken place so rapidly as to excite serious apprehensions for the future.

It will be easily conceived that it is not our part to dwell upon the causes of the incessant rise in the price of Peruvian bark; we may, however, allude to them in passing, for the above mentioned more extensive trial of the medicine has had its part in the production of the danger. The great consumption of bark which has taken place has led to unskilled farming of the forests of Bolivia, and an industrial society has been formed to improve the quality of the product. The trade in the barks of Peru has thus become a monopoly, and the price of the medicine has continued high, and almost beyond the reach of the poorer classes of society.

In this state of things there were many courses to adopt. While a learned society, by the institution of a considerable prize, challenged chemists to attempt the obtaining of every particle of quina, the Bulletin de Thérapeutique, comprehending the full extent of the mission imposed upon the medical press under such circumstances, directed the attention of experimenters to the study of the therapeutic agents capable of being substituted for the preparations of cinchona. The appeal has been heard, and numerous works have been published in support of the incontestible value of some succedaneums. These researches could not, however, end in the complete solution of the great problem in medical practice and social economy, for a substitute never offers more than a secondary therapeutic value.

While the entire medical body was engaged in determining, by clinical experimentation, the practical scope of the substitutes recommended to it, a learned manufacturer of chemical products approached the question in a higher and more radical point of view, as his project tended to restore the trade in the cinchonas to its former condition.

Bolivia and Peru are not the only countries which produce the cinchonas; in 1760, a Spanish physician, Dr. Mutis, head of the Botanic Expedition sent to New Granada, had discovered that the forests of these countries contained numerous species of cinchonas, the therapeutic virtues of which were not less than those of the

cinchonas of Peru. Mutis' assertion was the more to be depended on as it was based upon a study prolonged during thirty-five years' sojourn at Santa-Fé de Bogota; and as he had clinically tried all the species which grow upon the soil of New Granada. Desirous of freeing French commerce from the yoke of the monopoly of the Bolivian Society, and the medical body from the fear of ever seeing the valuable exotic product fail, M. Delondre, despite his threescore years, did not hesitate to undertake a voyage to New Granada, in order to ascertain upon the spot the extent of the resources indicated by Mutis.

This able chemist, rich in numerous specimens, immediately after his return to France, employed himself in drawing up, in concert with Professor Bouchardat, a new cinchonology, in which he has compared the cinchonas of New Granada and Vénézuela with those of Bolivia and Peru. Chemical analysis, since the valuable discovery of MM. Pelletier and Caventou, is the best criterion of the therapeutic value of this medicine. Now, in the magnificent work of MM. Delondre and Bouchardat, we see that the cinchona calisaya of Santa-Fé yields from an ounce to eight and a half drachms of sulphate of quina, and from forty-five grains to a drachm of cinchonia, for each kilogramme (2·6803 Troy pounds) of bark,—quantities of alkaloids which are not surpassed in the analyses of the best calisaya cinchonas of Bolivia.

The labours of M. Delondre, by proving that the new cinchonas are not less abundant in alkaloids than the old, consequently remove from henceforth every source of anxiety with respect to this valuable medicine, for the forests of New Granada are inexhaustible.

So far M. Delondre rendered a great service to his country; but all the questions suggested by a practical consideration of the subject were not yet solved. A desideratum long expressed remained to be fulfilled, that of a considerable abatement in the price of the valuable remedy. With the desire of attaining this object, some learned physicians, especially M. Bretonneau, have endeavoured to bring back the medical body to the practice of the older physicians, who made use solely of the powder. Notwithstanding the low price of this preparation, these attempts have always failed. The reason is easily assigned; the proportion of alkaloid contained in the barks of different species of cinchonas are most variable, ranging between three grains and a little more than nine drachms.

Moreover, it is to this very considerable difference in the richness of the barks that the discredit which attaches to the preparations of cinchona, such as extracts, wines, syrups, and decoctions, is due. The latter, in fact, offer no guarantee to the therapeutist of uniformity of composition, since it cannot be known with what barks they have been made. To this first source of uncertainty is added a second, not less important. The alkaloids of cinchona are but little soluble in water, so that the extemporaneous preparations, even though they should be made with barks the richest in organic bases, can furnish

medicines of only feeble efficacy, above all as special therapeutic agents.

MM. Delondre and A. Labarraque conceived the idea of supplying the desideratum by composing an extract which should faithfully represent all the useful principles of cinchona. The Minister of Agriculture and Commerce, acting on the advice of the Academy of Medicine, having approved of the formula for the composition of this extract, designated by the name of quinium, we think we ought, before producing the formula, to explain the principal reasons which have led to this authorization.

The following are the principles on which this preparation is based. It was, in fact, necessary —

1. To find a preparation admitting of the use of all the cinchonas which contain, at the same time, quina and cinchonia in considerable proportion, and these are the most numerous. M. Soubeiran, in his course of pharmacology, observes that the association of cinchonia with quina presents, in many cases, important advantages, and that the two febrifuge bases are complementary to one another in a therapeutic point of view.

2. To obtain uniformity in the product by an easy and strict proportionment of the febrifuge alkaloids, thus practically applying, in the most useful manner, the discovery of Pelletier and Caventou.

3. To preserve all the useful products of the cinchonias by removing only the inert matters which interfere with the easy absorption of the active principles, and oppress the digestive organs.

4. To establish a proportion of quina and cinchonia, similar to that found in the cinchona, which the experience of all ages has shown to be the most efficacious, the bright red cinchona, which is at present scarcely employed, on account of its very high price.

5. To simplify operations, so that nothing may be lost, and so as to afford the best febrifuge at the lowest possible price.

The question of price is, in fact, very important in dealing with a dear medicine, the use of which ought to be continued, and which is most frequently necessary for the poorest country labourers.

The following is M. Labarraque's formula, as it has been adopted by the Académie de Médecine, and entered in their Bulletin:—

Formula for the alcoholic extract of cinchona by means of lime.— Take cinchona barks of known composition; mix them in such quantities that the quina may be present, relatively to the cinchonia, in the proportion of two parts of the former to one of the latter.

Pound the barks; mix the powder with half its weight of slaked lime; heat the mixed powder with boiling alcohol until the barks are exhausted; collect the greater part of the alcohol by distillation; complete the evaporation. The residue is the alcoholic extract of cinchona by means of lime.

Seventy grains of this extract ought to yield, by the ordinary processes, fifteen and a half grains of sulphate of quina, and nearly eight grains of sulphate of cinchonia.

Pills of Quinium.—Two and a half grains of quinium in a pill represent one-third of their weight of febrifuge alkaloid. Thirty of these pills, which are sold for about fifteen pence, suffice in the majority of cases for the cure of an intermittent fever; from five to ten are given in the twenty-four hours, as far as possible from the approaching paroxysm. Half a glass of wine is taken after each dose.

Wine of Quinium.—This wine, which may be of great use as a tonic, as a febrifuge, and in preventing the return of obstinate intermittent fevers, is prepared by M. A. Labarraque by dissolving seventy grains of quinium in twelve times its weight of alcohol, adding thirty-five ounces of good white wine, and filtering. The wine contains about twenty-three grains of the alkaloid in thirty-two ounces; the dose is from an ounce and a half to three ounces as a tonic, and from three to six ounces as a febrifuge.

The following are M. Bouchardat's observations in his "Traité de Thérapeutique et de Matière Médicale," on the comparative advantages of the sulphate of quina and quinium:—

"Whenever it is necessary to cut short a paroxysm surely and quickly, sulphate of quina will always have the superiority over all the other preparations of cinchona; none of them, not quinium itself, can be compared to it for this marvellous power. For this reason no substitute is to be found for it when we have to deal with essential paroxysms. But when it is our object to cure a fever of long standing, surely and without shocks to the system, quinium resumes its supremacy.

"In treating intermittent fevers in an hospital or in a healthy locality, remote from the foci in which these fevers have originated, the expectant system alone (as M. Chomel had so well established for the hospitals in Paris, and as M. Laveran has verified in those of Blidah) suffices in the great majority of cases; sulphate of quina is, under these circumstances, the most valuable adjuvant; it still shows in these special instances its incontestible superiority, in quickly and effectually relieving the patients from the intermittent fevers which tormented them.

"But it is when the patients remain in the localities, and under the conditions in which they have been attacked by the fever, that the remedy which subdues the disease without disturbing the system, in its turn resumes its superiority.

"It is in fever countries, in the midst of the causes which have given birth to the fevers, when these same causes persist, that all the advantages of quinium appear. Under such circumstances, M. Vahu has administered it in Algiers, M. Hudellet in Dombes, and I myself in several fever localities in the department of l'Yonne."

To this first testimony borne by M. Bouchardat, we hope soon to add further information on the subject. Quinium is being largely tried in the cliniques of M. Trousseau, at the Hotel Dieu, and of M. Aran at the Hôpital Saint Antoine, and these experiments will furnish the opportunity of returning to this important question.—*Bulletin Général de Thérapeutique*, 30th November, 1857, p. 450.

On Effusions into the Tunica Vaginalis, metastatic of Inflammations of the Posterior Fauces. By DR. ARISTIDE VERNEUIL, Surgeon to the Hospitals, &c.

BEFORE entering on the subject of the present paper, I must observe that I attach only a secondary importance to the word *metastatic*, which I apply to the following cases. In the present state of science it is impossible to explain satisfactorily the relation which exists between certain diseases showing themselves simultaneously in very distant organs, belonging to different categories, and even to two distinct organic systems. The idea of the transference of a morbid matter, of a metastasis in the strict sense of the term, cannot be established, and for my part I fully adopt the judicious criticisms put forward by Dr. Tholozan in reference to this ancient dogma, in his remarkable competitive thesis[a]. However, as the term metastatic orchitis is usually applied to the acute affections of the testicle and its appendages, accompanying certain tumefactions of the parotid gland, I adopt the same language, but merely to express a fact, and not to support a doubtful etiological doctrine.

My sole object at present is to direct attention to a new and interesting fact, which has not as yet found a place in nosology. The first case I observed occurred many years ago; I recollect having seen the same fact mentioned in a case given in a thesis, the reference to which I have been unable to find; lastly, I have seen a third and very conclusive case. I am therefore led to believe that serous effusions into the tunica vaginalis, consecutive to angina, are not extremely rare, as I have myself observed them twice.

CASE I.—*Acute Amygdalitis; considerable effusion into the tunica vaginalis; spontaneous and rapid cure; arrest in the subsequent development of the testicle.*—A child of twelve years, of a good constitution, and very subject to attacks of amygdalitis, was seized with this latter affection without serious local or general symptoms. In going to stool, he perceived by chance that the scrotum was of unusual size and weight; the right side was swollen, tense, and quite insensible to the touch. No spontaneous pain had occurred to attract the attention of the little patient, who acknowledged nothing to his parents, but thought it well to take to bed, as he was in the habit of doing when the attacks of amygdalitis acquired a certain degree of intensity. During twenty-four hours the tumour still increased; but at the end of that time the angina, which had lasted three days, began to resolve, and the swelling of the scrotum did the same. Three or four days after, all had returned to the normal condition.

Several attacks of angina supervened during the subsequent years, and each time the young man carefully examined the inferior region, but nothing was afterwards observed there. At the period

[a] Des Métastases, Fellowship Concours. Paris, 1857.

of puberty the genitals became developed; but the right testicle, while it increased to a certain extent, remained soft, and less in size by one-third than the left testicle, which ever after preserved its excess of dimension. About the age of 24, the patient contracted an intense blennorrhagic orchitis, affecting the same right testicle.

I have recently examined the young man, who is now a distinguished physician, and was my fellow-student; the testicle of the side on which the effusion had taken place twenty years previously has remained soft, and but slightly developed; the epididymis has, since the occurrence of the orchitis, presented a nucleus of induration.

I have already brought this case before the Société de Chirurgie; but with reference to atrophy of the testicle consecutive to an attack of orchitis occurring at an early age, a youth, brought forward by M. Guersant, presented the latter peculiarity in a very marked degree.

CASE II.—On the 20th of May, 1857, a boy aged 10 years was admitted into the Hospital for Children. He had presented himself the evening before with a considerable swelling, situated in the right side of the scrotum, which M. Gibert, the house surgeon on duty, easily recognised as a hydrocele by its fluctuation, transparency, indolence, &c. This tumour had been suddenly developed two or three days before, and without any appreciable cause. Nothing had ever occurred on this side; no external violence could be recollected, neither hernia nor varicocele was present.

21st. On our visit the effusion had considerably diminished under the sole influence of rest in the horizontal posture. The evening before there had been only a little inconvenience, caused by the distention of the tunica vaginalis and the weight of the tumour: these symptoms had disappeared. On questioning the patient I was struck, on his first answering, with the masked tone of his voice, which immediately led me to suspect the existence of angina. The child stated that, in fact, ten days before, he had been affected with tolerably severe sore throat, with difficulty of swallowing, alteration of voice, &c. In six or seven days after the commencement of this illness, the swelling of the scrotum set in, and the symptoms affecting the posterior fauces disappeared.

The examination of this cavity still exhibits a bright redness of the uvula, of the pillars of the velum palati, and of the posterior wall of the pharynx; the tonsils participate in the redness, but they are only moderately developed; deglutition is no longer painful, but the voice is still nasal. I cannot ascertain whether there has been simple amygdalitis or mucous angina.

Scarcely a spoonful of fluid remains in the tunica vaginalis; the integuments of the scrotum are flaccid, and the two testicles are recognised, indolent, and of the size they ought to be at the patient's age. I prescribed rest in bed, and the application to the scrotum of poultices, sprinkled with goulard water.

On the 22nd all had disappeared; the redness of the throat was

almost gone; the voice had returned to its natural state. He was dismissed on the 23rd.

The two cases above reported present a great similarity to one another, and also resemble in their course most cases of orchitis metastatic of mumps. The effusion came on without pain or acute local reaction; for which reason I have not adopted the terms orchitis, vaginalitis, indicative of inflammation. Neither does the rapid and spontaneous disappearance of the fluid comport with the manifestations of hydrocele or dropsy, which are always characterized by a certain degree of permanence. I prefer simply saying that there was serous effusion, which prejudges nothing. In the first case there was coincidence between glandular inflammation and the hypersecretion of the serous membrane; in the second, I am ignorant whether inflammation of the tonsil existed, or whether the mucous membrane alone of the throat was affected. In the first case we have simultaneous disturbance in two glands, the tonsil and the testicle, for dropsies are sometimes symptomatic of lesions seated in the viscus, the serous membrane of which becomes filled with fluid; in the second, if the tonsillitis was absent, we might find reason to compare the effusion with those hydarthroses which I have described as following some cases of dysentery.

But, in conclusion, these comparisons and these theoretic explanations can acquire some value only when based upon more numerous facts. I prefer to call the attention of observers to the coincidence I have just brought forward, and also to the consecutive atrophy of the testicle, so well marked in the first case. This termination appears formidable after attacks of orchitis occurring at an early age, as is illustrated by the other case quoted by M. Guersant.

I shall close this paper by observing that I on one other occasion saw the effusion into the tunica vaginalis rapidly produced and as quickly resolved in a child of fourteen or fifteen years; he attributed this to tolerably severe bodily fatigue. I do not know what to think of it; but I remarked in him a tolerably decided varicocele, which might certainly play a part in the production of the fluid.

I think we have here matter for rather interesting study: I have only roughly sketched it; the subject remains almost entirely to be made out.—*Archives Générales de Médecine*, October, 1857, p. 452.